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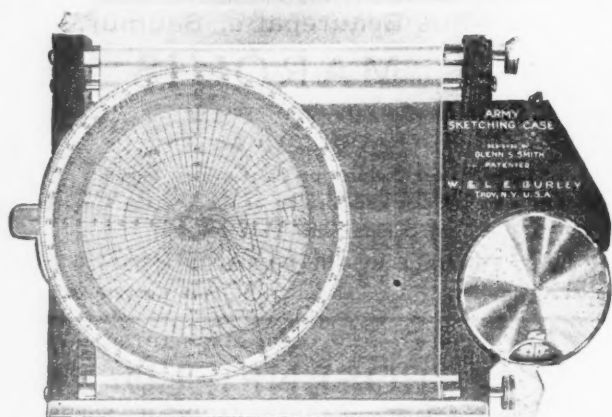
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VOL. XXIII.

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THE CAVALRY AT THE SIEGE OF HARPER'S FERRY IN 1862.

BY MAJOR GENERAL GEORGE B. DAVIS, U. S. ARMY, RETIRED.

THIS is the story of an operation that was never made the subject of official report, but is worthy of commemoration because of the boldness of the undertaking, the dangers which beset the command, the skill with which it was conducted and the unlooked for success which marked its termination. The post of Harper's Ferry was held during the summer of 1862, by a garrison of about 12,000 men of whom some 1,500 were cavalry. The cavalry consisted of two regiments—the Eighth New York, Colonel Benjamin F. Davis, an officer of the regular army, the Twelfth Illinois, Colonel Arnold Voss, and some separate companies mounted from Rhode Island and Maryland. We are not told why so much cavalry was stationed at Harper's Ferry, unless the administration had it in mind to move the whole garrison to Martinsburg, or elsewhere, where it might have been of use, and where some profitable employment might have been found for so considerable a mounted force; but the garrison was *there* and the successful efforts of its cavalry component to escape, when the place was invested by the Army of North-

ern Virginia, during the Antietam Campaign, will constitute the subject of this paper.*

Harper's Ferry lies at the confluence of the Potomac and Shenandoah Rivers. To complicate the topographical situation a portion of the Blue Ridge here crosses the larger stream and passes through Maryland into Pennsylvania. The place is commanded by three considerable heights—Bolivar and Loudoun on the Virginia side and the almost inaccessible Maryland Heights on the opposite shore. The place was as incapable of defense as the bottom of a well. If it was necessary to occupy it, as a matter of information rather than security, a battalion of infantry would have been more than sufficient for the purpose, and its commander should have been instructed to exercise his battalion, at frequent intervals, in the evacuation of the place, in each of the directions in which escape was possible, with a view to enable him to make an expeditious "get away" when the place was invested by a superior force of the enemy. When General Lee determined to cross into Maryland, after the second Bull Run Campaign, he gave Harper's Ferry the go by and pushed on with the main body of his command in the direction of Frederick City, followed at some distance by General McClellan. As 12,000 men was too large a force to leave on one side, General Jackson, with three divisions of infantry, was detached and charged with the reduction of Harper's Ferry. Without

*Notwithstanding its importance, no formal report was ever made of the gallant effort of the cavalry to cut its way out of Harper's Ferry, in September, 1862. The place was already completely invested on the Virginia side and a force considerably superior to the entire garrison stood ready to intercept it should it attempt to cross into Maryland. Captain I. W. Heysinger who is one of the survivors of the desperate undertaking has attempted to remedy this defect by the preparation of an exhaustive study of the movement from its inception in Harper's Ferry to its successful termination at Greensburg, Pennsylvania, all within the compass of a short autumn night. Captain Heysinger is a native of the vicinity of the route traversed and served very creditably in one of the cavalry organizations, and is thus admirably fitted for the difficult study which he has just completed. By his kind permission I have been able to avail myself of the data collected by him, and I desire to offer him my sincere thanks for his great kindness in loaning me his manuscript, which I hope will soon appear, in book form, as a valuable contribution to the professional literature of that eventful period.—G. B. D.

the slightest difficulty the investing forces established themselves on the three considerable heights completely surrounding the place, and waited for it to drop into their hands which it shortly did.

Jackson's command consisted of his own division under J. R. Jones, and those of Ewell and A. P. Hill. Leaving Frederick on the 10th of September his main command crossed the Potomac at Williamsport and marched in the direction of Martinsburg, with a view to the capture of the outlying forces at that place; this was prevented by their retirement to Harper's Ferry on the evening of September 11th. Ewell and Jones occupied Bolivar Heights, on the north bank of the Shenandoah, while Walker possessed himself of Loudoun Heights between that stream and the Potomac, and the lines of investment were closed by A. P. Hill, who connected with Ewell and Walker across the narrow valley of the Shenandoah. McLaws, acting under separate instructions from General Lee, moved with his own division and that of Anderson with orders to take possession of Maryland Heights with a view to prevent McClellan from getting in to Harper's Ferry, and, equally, to prevent its garrison from getting out. This he accomplished by taking post at Weverton, at the southern entrance to the pass in which Harper's Ferry is situated. McLaws was thus able to frustrate any attempt on the part of either the cavalry or infantry contingent of the garrison to make its escape to the south in the direction from which General McClellan was approaching. In the grim list of the Confederate commanders who now surrounded Colonel Miles command the fate of the place could be read with certainty. Colonel Miles, a good soldier, somewhat advanced in years and sadly wanting in the vigor and resolution which the hour and occasion demanded, here crowned a lifetime of faithful service by the sacrifice of his life. He was clearly not in the class with Jackson, Ewell and either of the Hills, and so, sorely stricken by mortal wounds, passed from the weak and purposeless defense to his eternal rest.

From the time the investment was completed, on the 13th of September, it was obviously hopeless for the main

infantry command to leave the defensive position at the confluence of the rivers; the avenues of entrance and exit were all closed by a superior force of the enemy, with which the smaller command of Colonel Miles could not have coped with any chance of success, even in the open, much less when the question was of dislodging the infantry force from its points of vantage on three sides of the place. Nor could the infantry have succeeded in breaking out by crossing the Potomac to the Maryland shore, for a superior force of infantry awaited them in that direction. The cavalry might still pass out by the road at the foot of Maryland Heights, an unpromising enterprise at the best. If the infantry were to make the attempt, it would be followed into its defensive lines by Jackson's main command; should it succeed in crossing to the eastern bank it would then have encountered McLaws, with his own division and that of Anderson—together aggregating more than the entire strength of the garrison—and posted to the best advantage at the Weverton entrance to the cañon through which the Potomac flows as it emerges from the mountains.

The case was otherwise with the cavalry. The infantry could protect its crossing. True it might come to grief before it succeeded in passing the steep flanks of Maryland Heights but, if it was so fortunate as to get beyond them, into the main valley of the Antietam, it would be possible for it to pass around any intercepting infantry that it might chance to meet on its way to Pennsylvania and safety. But the difficulties were great and the outlook most discouraging by any route that gave even the faintest promise of success. If the cavalry turned to the south, after reaching the Maryland shore the well posted infantry of McLaws would be encountered. General Lee who had reached Keedysville, in the upper valley of the Antietam, on the morning of the 14th was very much concerned about the safety of McLaws command, and had sent him the most imperative instructions to abandon his post at Weverton and join him at Sharpsburg, either by the river road through Sandy Hook or, if that was closed by the enemy, to take to the brush, so to speak, and see what could be done in the way of crossing the main portion

of Maryland Heights. In point of fact McLaws was in no danger from the command at the Ferry, though it seemed at one time that Franklin, whose command formed the left of the Army of the Potomac in its advance, might have compelled his withdrawal from the east, but no such danger confronted him from the side of Harpers Ferry, even in the very improbable contingency that it might attempt to cut its way out to the southward in the direction of General McClellan's advancing army. But McLaws was safe for the main garrison was held as in a vise by the divisions under Jackson, which closed every approach to the place and rendered escape in any direction impossible.

To sum up the situation, had any force of cavalry or infantry attempted to escape by the south bank of the river it would have walked into the very arms of Jackson's main command, posted with a view to that very contingency; the route by the Maryland shore abounded in dangers, but offered a fighting, or, rather a running chance of escape from the fate that awaited the place itself. General Lee's intentions were not known to the garrison at the Ferry and anything like an exact knowledge of his movements might have acted as a deterrent and extinguished all hope of escape.

During the 14th of September, it was decided, for reasons already stated, that no attempt should be made with a view to the withdrawal of the infantry and artillery, the movement of the cavalry was approved, however, and at dusk the mounted force crossed by the pontoon bridge to the Maryland side of the Potomac and, turning to the north, climbed the precipitous base of Maryland Heights; so soon as the ground permitted it, bore off to the left along the almost impossible slopes of the mountain, encountering no opposition from McLaws whose duty it was—first to prevent the garrison from joining McClellan to the south and, second, to withdraw from his position at Weverton and join the main Confederate army which was fast assembling in the upper reaches of the Antietam. The difficulties encountered by the cavalry during the first hours of its march were entirely topographical, and these to a great extent disappeared when the command debouched into the lower valley of the Antie-

tam. Here its perils really began and, to realize what they were, it is necessary to say a word as to the contemporaneous movements of General Lee.

The town of Frederick had been Lee's first objective, and he had reached that place safely on September 8th, followed at a reasonable distance by the Army of the Potomac. As the enemy approached General Lee determined to withdraw to the Virginia shore; the purpose for which the invasion had been undertaken had failed of accomplishment and there was no longer any reason for his remaining in territory which had not shown itself favorably disposed to the Confederate cause. On September 10th, Jackson's command of three divisions set out for Harper's Ferry, via Boonsborough and Williamsport. Longstreet marched to Hagerstown, his purpose being to recross into the Valley of Virginia at the same point. McLaws with two divisions moved to Weverton at the southern entrance to the Ferry. General McClellan's advance followed so closely upon the retirement of his opponent that D. H. Hill was attacked in the passes of the South Mountain on the afternoon of the 14th, and General Lee, finding that he would not be able to cross into Virginia, without opposition, determined to concentrate his somewhat scattered forces and give battle in front of Sharpsburg in the lower waters of the river. To that end Jackson was recalled from Harper's Ferry, which surrendered on the 15th, and reached the vicinity of Sharpsburg on the morning of the following day, leaving A. P. Hill to conclude the details of surrender. Longstreet moved directly to the Antietam and took position on the right of the Confederate line—his command being passed by Jackson who occupied the left.

From this showing of the movements of the enemy, it will be seen that it was of the very first importance that the cavalry should not march into General Lee's arms as it passed into the valley of the Antietam, a danger which as will shortly appear, it escaped by the skin of its teeth. When the command entered the town of Sharpsburg, at about midnight of the 14th, there was hope of plainer sailing insofar as the conditions of marching were concerned, as Sharpsburg is joined to Hagerstown by an excellent pike. The column

had hardly entered upon the enjoyment of the smooth roads, over which it would be possible to make time, when, in the inky darkness of midnight, it encountered a strong Confederate outpost at the eastern end of the town. It was not a mere outlying picket, but a command of sufficient strength to hold its position, in the event of attack, until support could reach it from the main body but a short distance away. Clearly this was not what Colonel Voss had expected; he was not looking for any part of General Lee's army, but for a practicable route to Pennsylvania, or to some nearer point from which General McClellan's whereabouts could be ascertained. Disengaging himself from the embarrassing outpost, which he was fortunate enough to do, he turned the command into the woods and fields on the west side of the Hagerstown pike and pushed on in the direction of Mason and Dixons line. So far as he could see, in the black September night, he was, for the time being, out of danger from the outlying Confederate infantry.

Pushing on, without light, without guides and with an uncertain destination, he made the best use of the remaining hours of darkness in gaining ground to the north and west. In doing this it was not wise to get over too close to the Potomac for Jackson was there, and Williamsport, which was full of the enemy, was an equally unpromising destination; and so he kept on, following so far as was safe, the line of the Hagerstown pike, for along that pike there was promise of safety, provided no more of General Lee's inconvenient outposts were encountered during the night. But there was no longer any danger from this source, for the main body of the Confederate army was at some distance to the east, on the Boonsborough pike, with orders to concentrate on Antietam Creek and Jackson, having compelled the surrender of Harper's Ferry, was on his way to the same point. McLaws was hurrying to Keedysville, in ignorance of the fact that the cavalry had made its escape from the garrison; and A. P. Hill who had been left behind by General Jackson, to carry into execution the details of the surrender, completed his task on the morning of the 17th, and reached the field—where he was very much needed—in the afternoon of the same day.

The cavalry was now making satisfactory headway and had succeeded in getting some eight miles to the good when the sound of many feet reached it as it neared the pike in the vicinity of Jones Cross Roads; this was Benning's Georgia Brigade which was following Longstreet's command on its way to join the main body of the enemy at Sharpsburg. The Cavalry approached the Hagerstown pike just as the rear of Benning was passing; as the dust hung in heavy clouds and the country in this vicinity was sparsely wooded, its approach had not been observed in the darkness. Voss, equally unaware of the close proximity of the enemy, continued on his way, after a brief and unimportant stirring up of the stragglers who were driven away and, sleep being impossible under such disturbing conditions, hastened in the direction of their departing commands. In this way Colonel Voss, favored by the fortune of war, was spared an attack which might have proved disastrous for, had Benning been a little more dilatory or had the cavalry attempted to gain the Hagerstown pike a half an hour earlier, this story would not have been told.

The Benning incident over the command, ignorant of the peril which it had so narrowly escaped, continued its march, still keeping to the woods and scrub lest another Confederate outpost might be encountered on its way to Pennsylvania and safety. And just here a new point of danger developed itself. Not far from the Cross Roads General Pendleton, the commander of the Reserve Artillery of the Army of Northern Virginia, with so much of that arm as General Lee was not likely to have occasion to use in the impending battle, was on his way to Williamsport; moving on the dust padded road, he, too, was passed in the impenetrable darkness. The margin of safety this time was extremely small, had he been even partially encountered, both parties would have been to some extent "rumped," but probably not seriously damaged, such, indeed, was the obscurity of the night.

As is sometimes the case, the light of the stars seemed to gain somewhat in intensity as day approached and, just as it was breaking in the east, Colonel Benjamin F. Davis,

under whose skillful direction the march, was being conducted, approached the pike to verify another sound which seemed to come in a direction nearly opposite to that in which the column was marching; this was found to have been caused by a long Confederate wagon train which was crawling, in the darkness and dust, in the direction of Williamsport. Colonel Voss, the senior officer present, judging that the occasion was one calling for the trained judgment and skill, of Grimes Davis, wisely committed the formation for attack to his competent hands. The question presented was a simple one, from a tactical point of view—of delivering an attack upon a moving train in such a way that escape on the one hand and a disastrous stampede on the other should be avoided. To accomplish this Davis formed his own regiment—the Eighth New York—in line parallel to the moving train, charged with the capture of the wagons. The troops were told off in squads of six, to each of which the capture of a wagon and its subsequent control was assigned. The Twelfth Illinois and the contingents from Maryland and Rhode Island were formed in column of fours facing in either direction, so as to prevent an attempt to escape in either direction. Davis' skillful plans were carried out without the slightest hitch; of the six troopers assigned to each team, two rode on each side of the driver while two sojourned with the lead mules. As a result there was not the least confusion; each man knew precisely what was expected of him; the wagons were turned, straightened out on the road to Greensburg and, under the gentle suasion exercised by the troopers in the various forms of vigorous Anglo Saxon speech, took the gait of the column which, after beating off such of the scattered escort as seemed disposed to resist, soon moved out of range of the protecting infantry.

The news of the capture reached Longstreet just as Benning was going into position near the Burnside Bridge and he was directed to send back two of his regiments of infantry to see what could be done in the way of recovery. Benning's pursuing column did all that could be expected of a command that had marched all night and the greater part of the day before, but was obliged to return empty handed and report

that the task was one with which even Stuart himself would have been unable to cope, for the train was safe in Greensburg before that enterprising cavalry leader, with the greatest possible expedition, could have gotten his cavalry straightened out on the road to Pennsylvania, which had been taken by the wagon train, now protected by Grimes Davis with the equivalent of three regiments of cavalry behind him. The command reached Greensburg at about nine o'clock in the morning of the 15th of September, having evaded the enemy in several dangerous situations, and succeeded in bringing in some seventy wagons of General Longstreet's supply train containing the ammunition which was so sorely needed in the course of the battle of Antietam and the operations which followed. As the cavalry, whose journey to safety I have attempted to describe, had drifted into Harpers Ferry from several directions, and did not then, or for some time subsequently, form a part of any brigade command, each of the regimental and battalion commanders, upon arriving at Greensburg, felt at liberty to place such a construction as he saw fit upon Colonel Miles order to proceed to Sharpsburg, and report to Major General McClellan wherever he might be. "*Grimes*" Davis, with the true soldierly instinct which never failed him, mounted his command and, after a brief rest, joined General McClellan on the Antietam. He was assigned to the command of a brigade and with it participated in the later operations of the Cavalry Division under Pleasanton in northeastern Virginia.*

*Biographical note. Benjamin Franklin Davis, the subject of this sketch, was a native of Alabama, and was appointed to the Military Academy, from the adjoining state of Mississippi, in 1850; he was graduated in 1854, and, after a brief period of service as a brevet second lieutenant of infantry, was assigned to the First Dragoons, then serving in the extreme southwest. He participated in the extremely active operations against the hostile Apache Indians that were conducted in the Territories of New Mexico and Arizona, between 1856 and 1858, and was wounded in action with the Apaches on the Gila River on June 27, 1857. In 1858, he accompanied his regiment to California taking station at Fort Tejon.

At the outbreak of the Civil War, he was appointed Colonel of the First California Cavalry but, preferring service in the east, he severed his connection with that organization in November, 1861. He took an active and distinguished part in the Peninsular Campaign of 1862, and, on June 27, 1862, joined the Eighth New York Cavalry of which he had been ap-

In the spring of the following year, while in command of the brigade to which he had been permanently assigned, he was killed in a brilliant attack upon the enemy at Beverly Ford in an operation in which the cavalry of the Army of the Potomac was permitted to see the mounted employment of that arm under an acknowledged master of its use under all possible circumstances and who, had his life been mercifully spared, would have arisen to high and responsible command in the Cavalry Corps of the Army of the Potomac. But this was not to be, and "Grimes" Davis, beloved of those who knew his sterling worth and abounding soldierly capacity for successful leadership, fell untimely, at the head of his brigade while conducting a mounted attack upon the enemy, at Beverly Ford, Virginia, on June 9, 1863.

pointed Colonel. But little time or opportunity was allowed him to get his new command in order for in less than two months he joined General McClellan in the Antietam Campaign. Before the Army of the Potomac entered Maryland, Davis' regiment was actively employed in the upper Potomac, but was shut up, very much against his will, with other excellent commands in the utterly indefensible position, at Harper's Ferry, which was selected by the administration in which to make a stand against the impending invasion of Maryland. As the inevitable surrender approached, Davis' command, with the Twelfth Illinois Cavalry and some other troops composing the mounted portion of the beleaguered force, cut his way out and, after many vicissitudes that are made the subject of the foregoing sketch, succeeded, after a long and dangerous night march, in making its way to Pennsylvania.

Colonel Davis, affectionately known as "Grimes" by his friends and admirers who were many and enthusiastic—was too valuable a man to permit himself to be cooped up again, or to be employed in escorting his own forage and rations from the base of supplies, and was immediately assigned to the command of a brigade of cavalry by General McClellan. Here he was at his best, and Grimes Davis' best was something far beyond the common. The dead cavalymen which General Hooker declared he had never been able to see in sufficient numbers to satisfy his somewhat extreme taste for the by products of the battlefield, was shortly to be privileged to see many of them during the brief period of his command of the Army of the Potomac. In one of the early combats of *cavalry* against *cavalry* of which the year 1863, and those following were to see so many, he was killed while leading his brigade—not upon a place—but upon a mounted force of the enemy, of equal if not superior strength; and so the gallant spirit passed, in the tumult of battle, "to where beyond these voices there is peace." A photograph, dating probably from the late summer of 1861, is—or was, one of the cherished possessions of the Army Mess at the Military Academy, which in life, not less than in his untimely death he so much adorned.†

†Unfortunately this photograph can not be found or otherwise it would have been reproduced and used to illustrate this article.—EDITOR.

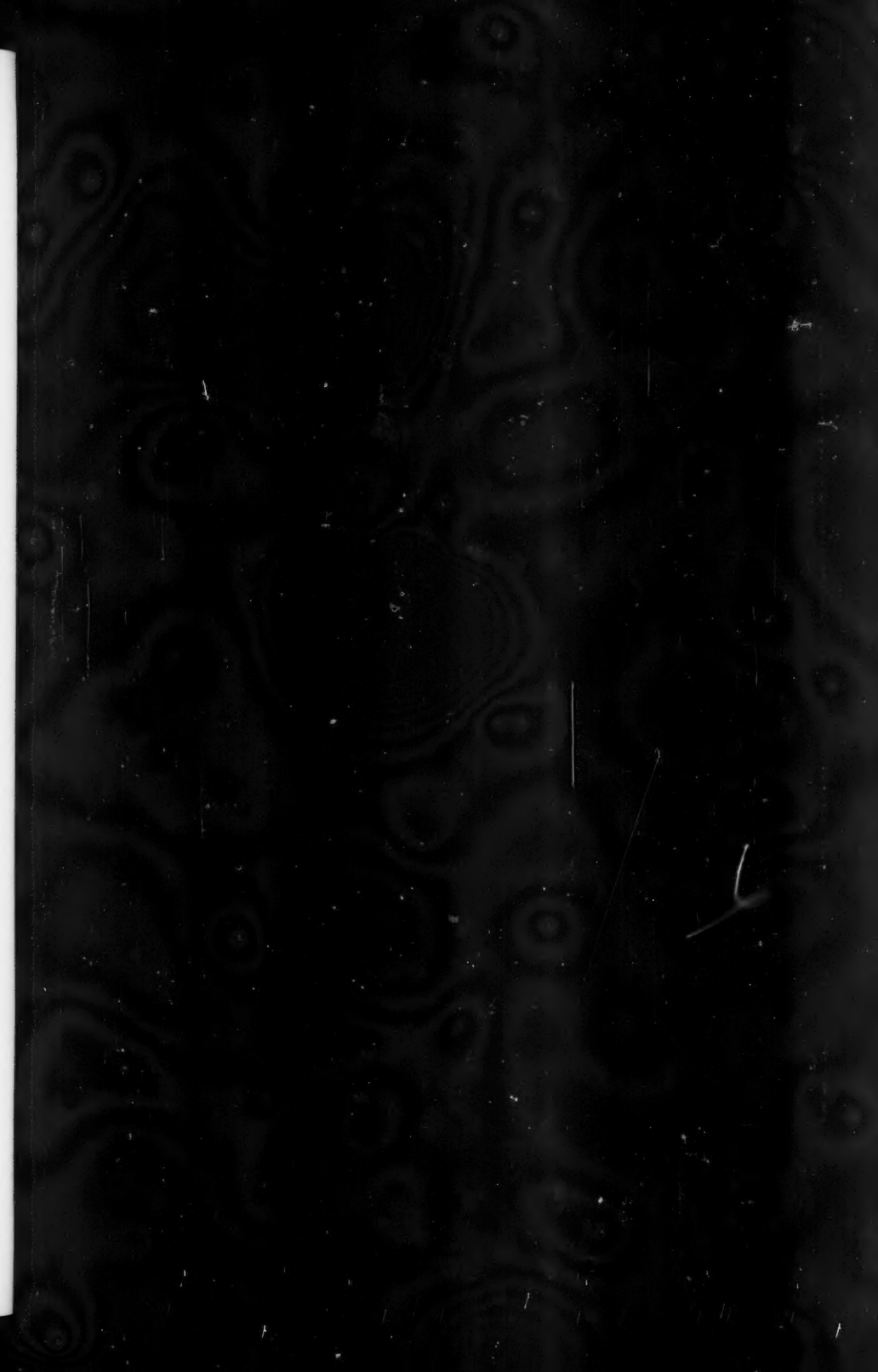
THE OPERATIONS OF THE BALKAN ARMIES.*

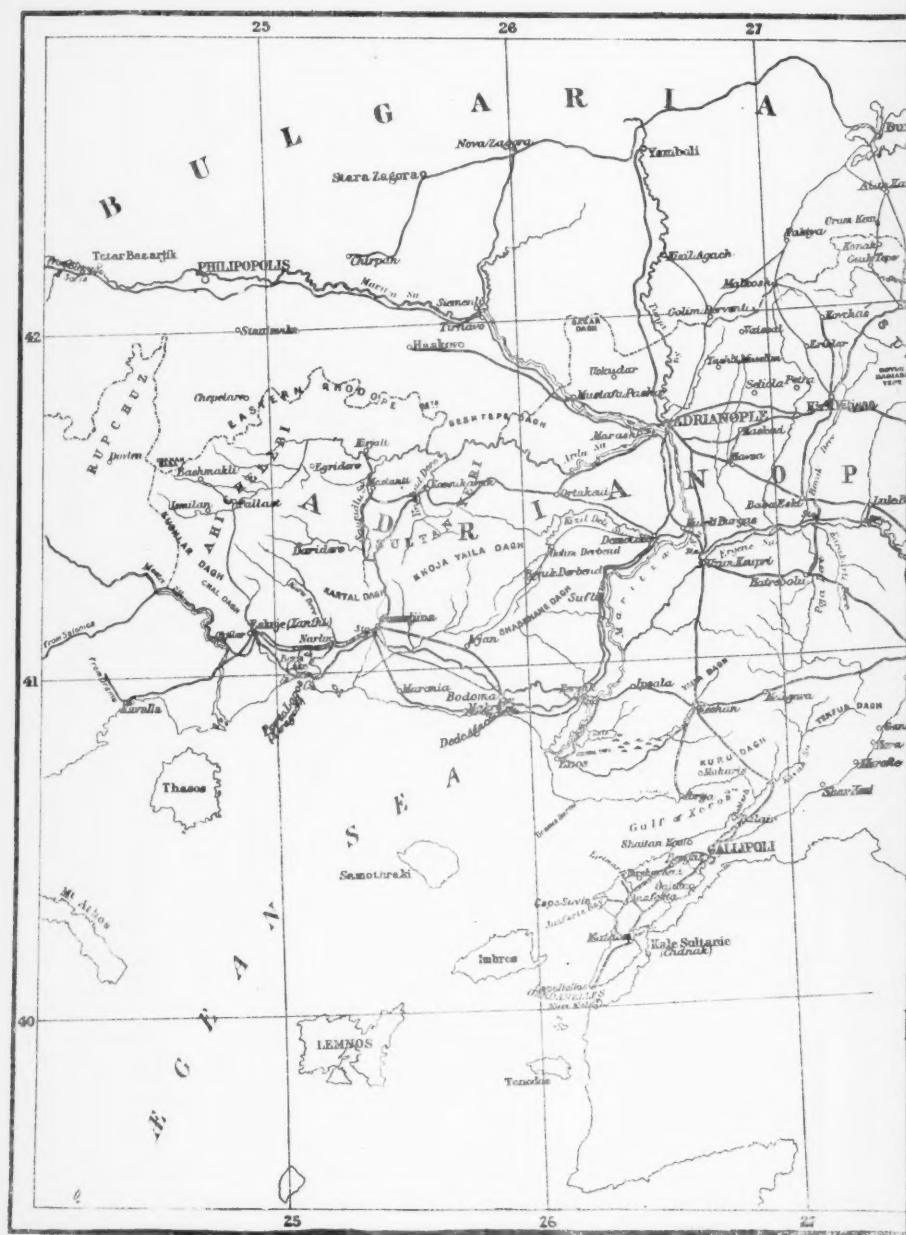
BY MAJOR R. A. BROWN, U. S. CAVALRY GENERAL STAFF.

SINCE the declaration of war on October 17th, events have rapidly taken place which have decided the results of the campaign and of the whole war. The details of forces engaged and of the places of minor and even larger engagements are still lacking, but in general the results show the general distribution of forces and the general lines of advance and the objectives of the various columns.

The Bulgarian armies advanced into Turkish territory in four columns or four armies. The Second or principal army of 60,000 to 70,000 men, under command of King Ferdinand, advanced by the valley of the Maritza to Mustapha Pasha and Adrianople. The First Army, about 40,000 men, crossed the frontier west of the Tundja River and advanced south into the country between Adrianople and Kirk-Killesse. After the battles of Kirk-Killesse the First Army, and later a part of the Second (or main) Army, continued the advance via Babi-Esaka—Loule Bourgas towards Constantinople. The Bulgarian East Army, 60,000 to 80,000 men, under General Dimitrief (Third Army), crossed the frontier north of Kirk-Killesse and advanced south to Kirk-Killesse, thence by Viza towards Constantinople. The Bulgarian West Army advanced down the valley of the

*This series of articles, together with the two translations that appeared in the March, 1913, number of the Cavalry Journal, pp. 834-44, ("The Brilliant Rôle of the Turkish Cavalry" and "The Battle of Loule Bourgas"), were furnished by Major R. A. Brown, U. S. Cavalry, General Staff, U. S. A. These two translations referred to as appearing in the last number of this JOURNAL were inadvertently credited to Lieutenant Colonel W. C. Brown, U. S. Cavalry. The spelling of place names has not been changed from those given in the copy although differing in some cases from the spelling on the maps. However, the same place is spelled differently on the maps. In connection with those herewith, see also the sketch maps in last number of the CAVALRY JOURNAL.—EDITOR.





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WAR DEPARTMENT
DEC 3 '12 1650-69
OFFICE CHIEF OF STAFF
WAR COLLEGE DIVISION

B L A C K
S E A



SKETCH MAP
of
EASTERN TURKEY IN EUROPE

Miles 0 10 20 30 40 50 60 70 80 90 100
Kilometers 0 10 20 30 40 50 60 70 80 90 100

Main routes possible for wheeled transport
Railroads
Bridges
Cableways
Tunnels
Ferries

Struma, with Salonika as the final objective. All the columns crossed the frontier promptly on the 18th, the day following the declaration of war. The Second Army captured Mus-tapha Pasha on that date and had daily skirmishes until the 23d, when it arrived in front of Adrianople. A number of engagements were fought before Adrianople on that date, and on the Arda side of the city the following days. On the 24th and 25th the investment of Adrianople was complete, except towards the southeast. In the mean time the Third Army advanced with daily skirmishes to Kirk-Killesse, near, which place a battle was fought and the town taken on the 24th.

The Third and First armies then made a half wheel towards the southeast and on the 28th, 29th, 30th and 31st of October, and 1st of November, fought the battle of the Karagatch or Loule-Bourgas. Defeated in this battle the Turks withdrew to the Tchalda lines of defense of Constanti-nople. Following the Turks the Bulgarian armies reached the Tchalda lines and commenced attacks on the works on November 8th. The attacks were unsuccessful except in some minor particulars; the Bulgarians were checked and it was not until the 17th that the serious attacks were re-newed. On the 17th and 18th the Bulgarian attacks were repulsed and the next day, the 19th, the armistice was agreed to, suspending hostilities, with a view to a treaty of peace.

The Bulgarian West Army advanced down the valley of the Struma in three columns and had difficulty situations to overcome. The advance could be made only as the hills on the sides were occupied, and with the head of the column abreast of those of the flanking column. This and the not important but fiercely contested actions at Nehomia, Eles-nica, and the defile of Kresna, are the causes that this army could not make in its advance more than an average of about four miles per day. On November 2d, this army was on the line Pechesevo-Kresna-Nevrokop. Its further advance was more rapid and it reached Salonika on the 9th, after the surrender of that city to the Greeks.

(Comment by an Austrian Field Marshal-Lieutenant.)

"The lines of operation chosen by the Bulgarian General Staff and the battles which took place during the advance of the Bulgarians upon those lines are shown in the foregoing rapid sketch. The chosen lines of operation and the grouping of forces upon them were imposed by the configuration of the terrain, the existing communications, and the situation of the chief towns. It was also natural that the greater part of the army should be placed on the line Philippopolis—Constantinople against the Turkish capital and its smaller part on the line Sofia—Salonika, against the second principal city of Turkey. The division into three armies of the main body directed towards Constantinople, and the advance of all the armies in separated columns every time it was possible, as in the valley of the Struma, seemed to be indispensable or were also natural and fit measures. It would perhaps have been of some advantage if weaker forces had tried from the beginning to advance on the line Pashamakli—Beleu-Buk, in order to occupy the railroad Salonika—Constantinople which is here distant only twenty-seven miles from the frontier, thus preventing or rendering more difficult the transportation of Turkish troops.

"The four Bulgarian armies have completely fulfilled their mission; to advance as rapidly as possible on the prescribed lines. The Bulgarian Second and First armies in the valleys of the Maritza and Tundja fought for the possession of the country immediately around Constantinople from October 18th to 24th, and finally on the 25th succeeded in investing Adrianople, except on the southeast. On October 29th, two of the outer forts were taken, but as it seemed better to try to take the place by the help of artillery and not by mere assault, the bombardment of Adrianople began on the 29th. Adrianople is an intrenched camp with a perimeter of 21 miles defended by works mostly earthen. How long the place could resist depends on the size of the garrison, the amount of their supplies, the state of the works, their armament, and, also on the strength of the besieging army, and the number of its heavy guns. If we assume Turkish conditions, it is more than probable that the works

are not finished, that supplies are deficient, and that the place has only the garrison strictly necessary for the defense. This supposition is undoubtedly correct and the Bulgarians have been able to detach a part of the besieging force without waiting for the fall of the place and have sent this detachment to assist in the attack on the Tchaldja lines.

"The Bulgarian Eastern army (Third Army) under General Dimitrief, reached the terrain before Kirk-Killesse on October 21st. Kirk-Killesse has three permanent works and some earthen entrenchments, which can be used as pivots during the defense; but it is not a fortified place and is not fit as a place of refuge to a large army corps.

"The Bulgarian East Army attacked the Turkish forces of this town—40,000 to 60,000 men. The result, after an action extending over 24 hours, was a complete victory for the attack.

"The Turks fled in disorder to Bunar-Hissar and Baba-Eski. The flying in panic of the Redif battalions and the shooting of each other of some detachments during the combats in the night are said by the Turks to have caused the loss of the battle. Whatever did occur, two facts must be stated: The energetic, resistless attack and advance of the Bulgars animated by the offensive spirit, on one hand, and the want of measures of security, discipline and of any tactical direction by the Turks on the other. The Turks; and the whole world, did know that the first great battles would be fought in the terrain Adrianople, Kirk-Killesse, Loule-Bourgas, Bunar-Hissar, and they had time during many weeks to concentrate here sufficient troops, to equip them with everything necessary, and, by well organized preparations (establishment of communications, of depots, sanitary depots and hospitals, organization of the security and information services, preparation of defensive positions, etc.), to create favorable defensive conditions, in order that the maneuver terrain, which is already fit in every respect might be employed for a defense of long duration.

"If conditions forced the army to remain on the strategical defensive, then everything should have been done to preserve as much as possible the tactical offensive in the

defense of that space, using the existing advantages. Nothing had been done, and the Turks were surprised and beaten like all troops undisciplined and badly led."

On October 26th the Bulgarian cavalry entered Baba-Eski and on the 28th the left division of the Third Army took Bunar-Hissar. On the 28th, 29th, 30th and 31st, the East Army attacked the Turks on the line Loule-Burgas—Viza. The Turks had been reinforced by new troops and had about 140,000 men, a force probably equal if not superior to the attacking Bulgarian armies.

(See account of battle of Loule-Burgas by Alain De Penonrun attached).*

The Servian armies advanced into Turkish territory in four columns or armies. The following were their respective lines of operation:

First Army, 90,000 to 100,000 men; Vranja—Kumanova—Uskub—Kalkandelan—Veles—Prilip—Mohastir.

Second Servian-Bulgarian Army, with two Bulgarian reserve divisions, two columns; Kustendil—Egripalanka—Kumanova—Uskub and Kotchankana—Isthtip—Veles—Prilip—Monastir.

Third Servian Army, 30,000 to 40,000; Kursumlje—Pod-ejevo—Pristina—Kotchana—Prizren—Djakova—Dibra—Durrazzo.

Fourth Servian Army, 20,000 to 30,000; The duty of this army was the military occupation of the district of Novibazar.

(Comments by an Austrian Field Marshal-Lieutenant.)

"The first and most difficult duty of the Servian army was the task of reaching with the utmost rapidity the railway Mitrovitza—Uskub—Veles with the fertile valleys of Uskub, Koumanova and Monastir, in order to interfere with the enemy using the railroad and to create for itself, by the occupation of the towns which form important points of communication, liberty of movement and favorable operative conditions. The second duty of the army was to take

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possession of the Sanjak of Novibazar. These two duties were brilliantly performed in fourteen days. The third and final duty was the disposal of the remainder of the Turkish troops in this section by dispersion or capture. This last duty was fulfilled by the capture of Monastir with the Turkish forces in that vicinity on the 17th of November.

"By the advance of the first Servian army the first battle was fought for the occupation of Koumanova on October 23d, while until then small encounters only were reported. The battle lasted ten hours and was rich in interesting episodes. There were storming attacks over open fields, ambushes, night operations, and many combats around the fortifications. Both sides had about 70,000 men in the battle, and about 7,000 to 8,000 wounded and dead covered the battlefield. This army met little opposition in its occupation of Uskub and many smaller places. Its next action was at the battle of Prilip, on November 7th. This battle seems to have been a severe action with heavy losses on both sides. In fact the battles of Kumanova and Prilip seem to have been the two most important battles fought by the Servian armies; both battles were participated in by the First and Second Servian armies.

"The second Servian Army had hard fights during its advance to Kotchana, Ishtip, and Veles, but the Turks did not engage important forces. From Veles the line of advance of this army seems to have been with the First Army towards Prilip and Monastir. Forces were sent some distance along the railroad towards Saloniki but the advance in this direction does not seem to have gone beyond Demipuri where a small action of some severity was fought.

"The Third Servian Army, whose first aim was the possession of Pristina, was at the beginning of operations delayed for many days because some thousands of Arnauts had forced back the Servian advance guards, had entered Servian territory and advanced as far as Kursumlje spreading great terror. During the remainder of the time this army found little opposition. Prizrend was occupied almost without a combat. A Servian column doubtless from this army was at Dibra on the 10th of November, and a few days later Durazzo was reported to be in the possession of the Servians.

"The Fourth Servian Army advanced into the Sanjak of Novibazar in two columns, one against Sjenica and the other against Novibazar. The latter column was forced back on the 22d, and could take Novibazar on the 23d only after hard assaults. On the 26th the Montenegrins also reached Sjenica and the desired communication of the two armies was realized.

MONTENEGRIN OPERATIONS.

"Montenegro began hostilities on October 9th, but none of her troops have reached more than a day's march from the frontier, except the troops at Sjenica.

"This small country is not prepared for or instructed for large operations, and it seems that the Montenegrins in stepping over their borders, had no other intention but the occupation of the Turkish places near the frontier, to take Scutari, Ipek and Djakova, and to join the Servian troops in the Sanjak of Novibazar.

"But even this intention they were unable to fulfill and they have never succeeded in taking Scutari.

"The Montenegrins succeeded only after long and bloody combats in reaching the Turkish places quite near the frontier; Berana, Gussinje, Plava, Tuzi and Bijelopolje. The occupation of Plevlje in the Sanjak and that of Rozay and Ipek cost but small losses while Sjenica was already occupied by the Servians when the Montenegrins arrived there October 26th. The reason why the Montenegrins could do so little and that with such difficulty in spite of their undoubted courage is that they had to fight against a great number of blockhouses and trenches, and although they had guns of position they could do nothing in this unaccustomed manner of combat. It must also be mentioned that the small Turkish garrisons in this theater of war who were isolated and few in number, have opposed in all the combats to the Montenegrins always superior in numbers, a very hard and heroic resistance. Quite especially in the defense of Scutari, which town the Montenegrins besieged for five weeks without success, the Turks have shown the most admirable courage."

THE GREEK ARMY.

The Greek Army crossed the frontier on the 19th, the main column from Larissa to Turovo, Elassone-Kozani, Servia, Yenidje, Vardar, Saloniki, with one flank column crossing the frontier from Trikala to Diakata, occupying Grevena, Servia-Kozani, Saloniki; and a smaller column skirting the Gulf of Saloniki. A smaller column, 12,000 against 18,000 Turks, operated north from the Gulf of Arta in Epirus against the Turks in this section with their objective Janina. The configuration of the boundary is such that the Turks possessed in their territory all the mountain passes, and before the war began it was thought more probable that the Greeks would not be able to enter Turkish territory but that the Turks were more likely to invade Greece. The Greeks, however, were able to enter Elassona practically without opposition on the 19th. On the 22d they fought a severe action for the pass of Sarantsporu and their success was largely due to the advance on Servia of the column from Diskata. They occupied Servia the next day and reached Kozani on the 26th. From Kozani the Fifth Division was detached to advance towards Monastir to cover the left flank of the army in its further advance on Saloniki. This flanking force met a larger force of Turks near Florina and were forced back, but they took up a position near Eksisu and fulfilled their mission of securing the left flank of the army. The main army reached Ferria on the 29th and the next action was at Yenidje Vardar, where they fought a severe action on the 4th of November, defeating the Turks. The crossing of the Vardar was weakly contested on the 6th, and on that day and the 7th the Greeks crossed at the railroad bridge which the Turks neglected to destroy. Negotiations for the surrender of Saloniki were begun on the evening of the 7th and the Greek army occupied the city on the morning of the 9th. The Bulgarians from Seres reached Saloniki the same evening and the joint occupation of the city by the armies of the two allies was the cause of considerable friction and some ill feeling, because of the lack of consideration of their Bulgarian allies on the part of the Greeks.

The Greek column in Epirus was successful in several minor actions until it reached the vicinity of Janina, which the Greeks have not succeeded in capturing to date. Janina, Scutari and Adrianople are the only places still held by the Turks.

The operations of the allies on the western theater of war show a certain coherence and connection in their direction, and this certainly had a great part in the successes won in so short a time.

The causes of the unexpectedly great success of the allies and the crushing defeat of the Turkish Armies have not been unknown in military circles.

Quiet and conscientious working upon all the problems involved carried on for so many years by Army Headquarters, fundamental preparations and equipment of the army for a war, extensive plans for the mobilization, well thought out plans of operations, good tactical leading and, finally the enthusiasm of all classes of the population for the war—these were the factors which led the Bulgarian and Servian armies to the victory.

On the Turkish side we find on the contrary oriental carelessness, neglect of war preparations, political quarrels among the officers, corruption among the authorities, many faults in the newly begun re-organization of the army which rendered negative the well known qualities of the Turkish soldier. The old, uninstructed but courageous officers were put away before a new and well instructed generation arrived; the spirit of the army was injured by the enrollment of the Christians, and the troops lacked all things necessary for life. How could an army which suffered want, which was badly equipped, which was composed of elements that had different ways of thinking, which was badly conducted, overcome superiority of forces by prodigies.

It seems that the Turkish Army Headquarters was greatly undeceived by the mobilization; the troops coming from Asia did not give the result hoped for. And if one takes into consideration that in Turkey in Europe of the whole population of six millions, there are only one and a half millions of Turks, it is surprising that with the disastrous

indolence of the Turkish authorities, and the neglects in the Turkish army dislocation and disaster did not come earlier.

THE SIEGE OF ADRIANOPLE.

A rough tracing is attached showing the distribution of the troops that are investing Adrianople. The information is not official but is derived from officers who have been on the spot. The detail of the artillery in the various sectors is as follows:

I. Arda (left bank) to Maritza.

- 1 regiment of field artillery, Q. F.
- 1 group, heavy artillery, Krupp, firing black powder.
- Positions:* Heavy artillery at Kuyunli. Field Artillery at Yurush.

II. Maritza to Tunja (right bank).

- One group of Bulgarian artillery composed of:
 - 2 batteries of 12 cm Krupp guns, not Q. F.
 - 1 battery of 15 cm Krupp guns, not Q. F.

Servian artillery:

- 1 battery of 12 cm Krupp guns.
- 1 battery of 12 cm Krupp howitzers.
- 1 battery of 7.5 cm Q. F., guns.
- 1 regiment of 8 batteries of 7.5 cm guns, Q. F.

Positions: Bulgarian group, Kemal. Servian group, Anirkeui.

III. Tunja (left bank) to Maritza.

- 1 battery of 12 cm Krupp guns, not Q. F.
- 3 batteries of howitzers, 2 of 12 cm and 1 of 15 cm.
- 1 regiment of 7.5 Schneider Q. F., field artillery.
- 1 regiment of 7.5 Krupp, not Q. F., field artillery.
- Positions:* On right between Tunja and Pradisinka
- 3 batteries of Schneider Q. F., field artillery.
- 1 battery of 12 cm Krupp guns.
- 1 group of 3 batteries of Krupp field artillery.

- In center, at Musubeili.
- 1 battery of 12 cm Krupp howitzers.
- 1 battery of 15 cm Krupp howitzers.
- One kilometer south of Musubeili.
- 1 battery of 12 cm Krupp guns.
- In reserve.
- 1 battery of 12 cm Krupp howitzers.
- On left, between Musubeili and the road near Skender keui.
- 2 groups of Krupp field artillery.
- In reserve.
- 2 groups of Schneider Q. F., field artillery.

IV. Maritza to Arda (right bank).

- 1 regiment of Q. F., field artillery.
- 1 group of 2 batteries of 12 cm Krupp guns. (The third battery is at Musubeili).

Positions: At Kartal Tepe.

2. The successive events which led up to the present situation are as follows: On the 18th of October when war was declared, the Second Army, under General Ivanoff, was concentrated in the triangle Haskovo—Hermanli—Tirnovno-Semenli. It was composed of the Third, Ninth and Eighth Divisions and one brigade of the Second Division. It had, also a brigade of cavalry, composed of the Third and Sixth regiments.

3. The Brigade of the Second Division was on the right flank. It had an independent task and marched over the mountains to Kirjali. The rest of the Second Division was charged with the protection of Philippopolis. Later on it marched to Kavalla under General Kovatcheff.

4. The Second Army moved along the railway line towards Adrianople, and on the night of the 18th a portion of the Eighth Division under General Kiroff, slept at Mustapha Pasha. The Turks were taken by surprise and their plans of blowing up the bridge over the Maritza were frustrated. The explosion of the charge that they had prepared only inflicted slight damage.

5. On the 19th of October, the Eighth Division defeated the Turks at Chermen, on the 22d at Hadikeui, and on the 23d at Yurush. In the latter fight the guns of the fortress were able to take part. After the fight at Yurush the Turks retired in great confusion into Adrianople, and General Ivanoff considered that he could then take the fortress, but he was not allowed to make the attempt. The Third and Ninth Divisions appear to have been in rear and to have taken no part in the above operations.

6. On the 23d of October the Cavalry Brigade crossed the Arda and got into touch with the enemy between the right bank of that river and the Maritza. The following day the investment of the fortress commenced and engagements were frequent. These were not sorties but encounters with the Turkish advanced posts, particularly at Kemal and Musubeili, and attempts to drive the enemy back in rear of the line of forts.

7. The Eighth Division occupied the sector between the left bank of the Arda and the Maritza, the Ninth Division between the Maritza and the right bank of the Tunja, the Third Division between the left bank of the Tunja and the Maritza and the Cavalry remained between the Maritza and the right bank of the Arda. I believe that it took more than one month from the 24th of October, to completely invest the fortress. The last portion to be closed was that which lies southeast of the town, between the left bank of the Maritza and the road to Loule-Bourgas.

8. Towards the end of October the Third Division left to join the Third Army. They did not take part in the battle at Bunar-Hissar, so probably they did not leave Adrianople before the 30th.

9. On the 27th of October the Eleventh Division was formed out of one Brigade of the Ninth Division and two brigades of Oplchenie troops, who were then arriving from Bulgaria to take place of younger men in the investing line. The Eleventh Division replaced the Ninth Division, which crossed the Tunja and took the place of the Third. On the 2d of November the Servian Timok Division of three regi-

ments arrived from Kustendil and took over the positions of the Eleventh Division, which crossed the Tunja and relieved the Ninth Division. The Ninth Division, less one brigade (Granscharoff's), given to Eleventh Division, then left to join the Third Army.

10. On the 11th and 12th of November the Servian Danube Division replaced the Eighth Division, which took the place of the Cavalry Brigade between the Arda, right bank, and the Maritza. The Third and Sixth regiments of Cavalry, which formed this cavalry brigade, were placed under the orders of General Taneff. They took part in the operations which culminated in the capture of Yanvor Pasha and 12,000 men northeast of Dede-Aghatch on the 27th of November.

11. The defense of Adrianople has not been a passive one and the Turks have made many sorties.

12. It does not appear that the Bulgarians have ever made a serious attack on any of the permanent works of the fortress. The artillery of the allies is too weak and is kept at too great a distance to make any impression on the forts. It has been able to bring fire to bear on the town from the north, but only at long range.

13. Two outlying works have been taken—"Papas Tepe," to the west of Marash, between the left bank of the Arda and the Maritza, and "Kartal Tepe," between the right bank of the Arda and the Maritza. The former was found to be untenable, and has been evacuated by both belligerents, but Kartal Tepe remains in the hands of the Bulgarians.

14. The object of attacking these works was to seize points from which the town could be bombarded. From Kartal Tepe, however, this cannot be done, although shells can be thrown into Karagatch, the outlying suburb, in which the railroad station is situated.

15. Bulgarian officers have always said that Adrianople might fall at any time, owing to want of provisions. I have, however, recently heard from a fairly reliable source that there were three and one-half months' supplies in the town

at the commencement of the siege. An officer of the Bavarian General Staff, who has been attached to the headquarters of the besieging Army since the 1st of November, tells me that he thinks the place could be taken at a heavy cost. The investing force is chiefly composed of Servian troops, and Bulgarian second-line troops, and in order to make a serious attack, they would have to be reinforced.

16. The Bulgarian line of communications around the south of the fortress is about forty miles long and is by motor cars and trucks along a metalled road from Dimotika, via Ortakeui to Semenli. From Semenli there is a bad road to Hadikeui and Karagatch stations. This road traverses a lot of marshy ground and is corduroyed at intervals for about five kilometers. It is not open to motor traffic. There are pontoon bridges over the Arda at Semenli (125 yards) and over the Maritza at Hadikeui. There is also a trestle bridge over the Maritza at Chermen.

BULGARIAN OPERATIONS ENDING WITH BATTLE OF
TCHATALDJA NOVEMBER 17 AND 18, 1912.

The Bulgarian forces crossed the frontier upon declaration of war in three main armies. The Second Army on Adrianople, the Third Army on Kirk-Killesse and the First Army between the Second and Third Armies.

The Second Army was successful in all its minor operations and began the investment of Adrianople on October 24th. The Third Army fought the decisive actions for the possession of Kirk-Killisse at Petra and Celiolou on October 23d and as a result of the Turkish defeat the Turks abandoned Kirk-Killisse without any defense of the latter place.

The Bulgarians have given out practically no information about the actions at Celiolou and Petra.

Le Journal of Paris, of December 25th, publishes an account of these actions given by Ludovic Naudeau. This account is of special interest because it gives what might be termed a Turkish estimate of the situation and shows how the Turks were deceived in regard to the military situation and supposed Bulgarian plans of operation.

The article is as follows:

Translation from "Le Journal" Paris, 25th, Dec. 1912.

Battles of which one never heard.

At the beginning of the war against the Turks while all the newspapers of Europe received a profusion of details on all operations of secondary order (and even for some of them the adjective is too strong) events of immense importance took place in secret; the world knew nothing of them, it knows nothing of them now, it knows only their results.

All military men have known for some time that the disasters of the Ottomans and their precipitate retreat toward Constantinople had as original cause the abandonment of Kirk-Killisse (Lozengrad) which the Bulgarians entered as conquerors on October 25th.

The capture of Lozengrad (Kirk-Killisse) (for the two names apply to the same town) was the decisive event of the Balkan war. So far nothing has been said about the causes which led to the fall of that place. Since Adrianople still resists the efforts of the assailants, how does it happen that the other fortress Kirk-Killisse, was conquered during the first hours of the war. It is time to say, there was no siege of Lozengrad, no battle of Lozengrad. The Bulgarians did not take the place by assault; they entered it only because the Turks saw fit to leave it. But thanks to what machiavelism and how did the Bulgarians succeed in getting their antagonists out of their entrenchments? That is what I shall explain. The fall of Lozengrad—Kirk-Killisse was the consequence of two great battles of which nothing had been said, the battle of Petra and that of Celiolou. But above all it was the consequence of an extraordinary stratagem of war.

It was well known from the beginning of mobilization the principal Bulgarian forces were composed of three armies. In addition the Bulgarian Great General Staff, by all sorts of colorable declarations, by apparent precaution, by secret orders which were nevertheless allowed to leak out and which reached some foreign officers, strengthened the assumption that at the beginning of the war all maneuvers would be pivoted upon Adrianople. General Savoff, commander-in-chief, stated in public that he would sacrifice 50,000 men in the Japanese

fashion to immediately gain possession of that strong place. And this statement was plausible for Adrianople commands the railroad and the road to Constantinople.

When war was declared the Bulgarian plan seemed so evident that many foreign journalists were not at all surprised when the censors with infinite kindness let them publish it in advance. Besides this the orders given to the three armies did not permit any hesitation on the part of a man competent to form an opinion. The 1st and 2d armies were to invest Adrianople while the 3d, to the west of the place, was to move first from north to south, then, having seized the railroad, was to take a resolute offensive toward the east, that is to say toward the principal army of the enemy. This was the famous Bulgarian plan.

All the officers of the Third Army received orders conforming with what I have just stated; all of them thought they were to be sent in the direction of Mustafa-Pasha and for a long time after their departure their families thought they were operating in that direction. But while the Third army thus began its movement toward the bridge of Mustafa-Pasha the higher officers of the General Staff were secretly carrying out an extraordinary plan. By its orders in all Eastern Bulgaria all postal and telegraphic communication was suspended, all suspicious individuals were arrested, even the roads were guarded; all the civil population was kept away from the railroads and the newspapers limited their publication to official communications (this is the time when the foreign correspondents were parked in a safe place). The most influential politicians, even former heads of the cabinet, were kept in ignorance of what was being prepared for. Suddenly the Third army, without leaving Bulgaria, made a sudden about face move, no longer south but straight east and was concentrated upon Jamboli, that is in the south-east corner of the kingdom. A great part of its artillery had already, secretly, long before the declaration of war, been moved into that district. Then the Third army moved forward still southeast through the very rough and theoretically impracticable country which forms the frontier of Turkey north of Lozengrad—Kirk-Killisse.

When hostilities began the Bulgarians after capture of Musta-Pasha ordered only their Second army (Gen. Ivanoff) to proceed to invest Adrianople. Their First army (Gen. Koutincheff) moved almost immediately from north to south by the valley of the Toundja and appeared between Adrianople and Lozengrad. As for the Third army (Gen. Ratchko Dimitrieff) we have just seen where it was hidden.

There was a Turkish army corps in Adrianople (Gen. Shukri Pasha) and another in Lozengrad (Gen. Mahmud Mukhtar Pasha), and in addition an army under General Abdullah Pasha and composed of the best corps, those of Constantinople and Rodosto, was moving from south to north toward the line Adrianople—Kirk-Killisse.

There was undoubtedly communication between Abdullah and Mahmud Mukhtar. The latter toward October 20th, reported that there was a Bulgarian force at Petra, a place about seventy-seven miles to the northwest. The two Turkish generals thought it was the left of the army charged with the duty of investing Adrianople. It was decided that Mahmud should attack it and that Abdullah moving to the rescue should execute a great enveloping movement.

But suddenly two utterly unexpected things happened: 1. Abdullah who was moving from the south at Celiolou (a village midway between Adrianople and Lozengrad) was furiously attacked by the advance guard of Koutincheff (First army). 2. Mahmud Mukhtar who had moved toward Petra to attack the Bulgarian force of which I have spoken found there not a wing of the First army but the advance guard of the third. That army was emerging with a furious onslaught from the mountains which had concealed its presence and was advancing like a cyclone.

The Third Army. Up to that fatal moment the Turkish generals had been persuaded that the Third Bulgarian army was moving in a district some seventy miles from Lozengrad and was painfully trying to cross the Maritza to the southwest of Adrianople.

The Turks were convinced that a real army would have found it impossible to cross the mountains which form the Turkish-Bulgarian frontier north of Lozengrad; the opinion

had become a classic. No one discussed it. Their security on the northern frontier was complete. The north simply could not conceal any danger; it was an empty zone and in a sense neutralized. With a light heart Mahmud Mukhtar had ordered the greater part of his army out of Lozengrad. Mahmud Mukhtar and Abdullah had every reason to expect that they would be able to close in a triangle that Bulgarian army with which they had just come in contact and force it back on the forts of Adrianople. It was for this reason that Mahmud, after he had obtained contact many times, ordered on October 23d, with great cleverness a night attack on the Bulgarians at Petra.

Things went badly. The whole army of Ratchko Dimitrieff which had just made an enormous physical effort to cross the foothills of the Istrandja Dag, all the Third army was about to emerge eager for glory, for vengeance and for carnage. The Ottomans had hardly begun their movement when they were themselves swept by shrapnel, counter attacked, beaten, swept back and pursued with bayonets at their backs. Two Turkish divisions in panic, throwing away their arms, abandoning their guns, fled in disorder pursued by the Bulgarians who struck without pity giving their terrible hurrahs. Already in the railroad station of Kirk-Killisse bands of fugitives were seizing the engines, and, without any authority, were making up trains which left at full speed. The roads were covered with lost men who were no longer soldiers.

At dawn on the 24th, the situation of Mahmud Mukhtar was already desperate, his troops were scattered, and the Bulgarian army, the third army, was coming out of all the valleys at the same time occupying the crests and to the east its columns were moving upon the town. It was then that the commander in Lozengrad heard of the disaster at Celiolou.

Ah, if Abdullah as a conqueror had been able at that tragic instant to appear at the head of his army what hope would have still remained. But Abdullah was himself in flight. His troops had just been cut to pieces at Celiolou by Koutincheff as the corps which left Lozengrad had been by Ratchko Dimitrieff.

At the beginning, at Celilou, a Bulgarian advance guard still separated from the rest of the first army had rashly engaged and had been almost annihilated, but soon the Bulgarian shrapnel began to burst and the furious bravery of the Slav soldiers rushing forward in a bayonet charge had routed the Ottomans. All was lost. The corps of Mahmud and the army of Abdullah were no longer anything but a bloody and panting crowd, a crowd of unfortunates who now thought only of saving their lives. The commander of the city had no means of defending himself. He was without troops. His army which had set forth gaily had not returned because the Bulgarians had driven, pushed, and forced his men before them. If Mahmud Mukhtar wanted to avoid falling into the hands of the enemy he had to flee. And this is what he did, abandoning all his baggage, all his papers—everything.

At the headquarters of the First Bulgarian army there was general stupefaction when they heard that the Third army had just entered Lozengrad—Kirk-Killisse. Victory had been expected, but not so promptly. How could a place defended by two great forts (which I have seen), by batteries and entrenchments, have been carried so rapidly. It had been because its commander had wanted to "maneuver" and because he had sent his army to be destroyed in the open field by one of whose proximity he was ignorant.

This explains in general lines the fall of Lozengrad—Kirk-Killisse. How does it happen nothing was known of it before? For one reason: a conquered army is usually not anxious to tell the details of its defeats. And another reason is that the Bulgarians, as I have seen many times, have desired to keep the methods of their preparation for this magnificent result hidden. Their official bulletins said nothing of the battles of Petra and Celilou where, however, Bulgarian blood flowed in torrents. Bulgarian officers have often spoken before me of "the capture of Kirk-Killisse" as if that fortress had really been taken by assault. It is the nature of the Bulgarians to always dissimulate, and besides as they had to continue the siege of Adrianople they perhaps thought it to their advantage to not tell the complete truth

immediately concerning this memorable event. It seems extraordinary but on my return from Tchataldja I dined at Kadikeuy before Adrianople with some officers of the Servian divisions which was taking part in the blockade of the place. Now on December 10th, my amiable hosts did not know the names of Celiolou and Petra and the story I told them of what happened there was news to them.

However this may be, it was owing to the absolute secrecy kept in Bulgaria about the concentration of the third army that the force of Mahmud Mukhtar was drawn into the open field and dispersed. Thanks to this secrecy the Bulgarians succeeded in seizing at the beginning of the campaign a fortified city which, though not as large as Adrianople, might, if rationally defended, have interfered with their offensive for a long time and cost them great sacrifices.

After Petra and after Celiolou the First and Third Bulgarian armies united and marched south toward Loule-Burgas.

While the second army continued the investment of Adrianople the third and first armies advanced and fought the battle of Karaguch, or Loule-Bourgas on the last days of October. Defeated in this battle the Turks withdrew behind the defensive lines of Tchataldja. No attempt was made to delay the advance of the Bulgarian troops and the first of the latter reached these lines on November 7th and 8th. But it was ten days later before their armies were up in force and they were able to deliver a serious attack on the Turkish defenses.

Up to this time the Bulgarians had been successful in every action and all accounts go to show that they entered upon these later attacks with great gayety of spirits in the belief that the lines were weak, the Turks demoralized and that the task of carrying the lines and marching on Constantinople would be an easy matter.

Just before the Bulgarians made their attacks on the Tchataldja lines all the writers, newspaper and military men, who had the best information bearing on the Turkish army were of the opinion that Turkish resistance would be in-

effective, and that the Bulgarians would be able to continue their advance on Constantinople.

But the Bulgarians failed in their attacks on the Tchataldja lines and right after their failure signed the armistice.

The best account of the battle is by Alain de Penennrun published in *L'Illustration*. The first part of his letter gives the position of the Bulgarian Divisions as shown in the sketch. (Tchataldja lines). The third army is along the northern section and the first army along the southern section. Erminkieu is headquarters of third army.

The 5th Division is in reserve on the left rear, the 3d Division on left of line, 9th Division on right of 3d, and 4th Division in reserve behind the 9th and 3d. The battle took place in front of the 3d and 9th Divisions as no serious effort was made in the southern section by the 1st army. The marshy valley of the Katarchi and the lagoon of Tchekmedje Gulf renders attack on this part of the line the least practicable. The most practicable section is at the water shed between the streams falling into the Black Sea and the Sea of Marmosa and in the sketch this place is opposite to the 3d Division. On this section the heights on the Bulgarian side are about 100 meters higher than the Turkish heights and defenses. Alain de Penennrun describes the splendid view from a point on these heights as seen by him on November 14th, three days before the battle. The Turkish works, camps and movements of troops were spread out before him like a map. Men could be seen digging trenches, tents of large camps were plainly visible and numerous bodies of troops on the extreme plains in rear of the works. These troops were moving and in various directions and were evidently being drilled and instructed.

This part of his letter is omitted and the following extract begins with the first day's battle, on November 17th:

The day is at hand: Yesterday after dinner we got the order to be ready this morning at half-past seven; and at the hour named we are all equipped and in saddle behind General Dimitrief, who, with his staff, reaches the post of command he has selected. It is exactly the same point to the east of Akalan which I visited two days ago.

I learn on the way that the entire artillery, the objectives of which were carefully determined the night before, should have begun the engagement at daybreak, but that, for various reasons, this was impossible. Meantime, while we are passing Akalan and regaining the other side of the slopes, some isolated cannon shots are fired; and then, as if it were a signal, other shots reply to the first from all directions. The noise spreads, surging wavelike from the north to the center, filling the air with a booming, which, at last, resolves itself into a continuous rolling as of a hundred thunder claps at once.

Arriving on the ridge, I try to make out some order in the tableau spread out before me, but at first I see nothing but a veritable ocean of bluish smoke, somewhat similar to vapors rising from a pond, which marks the mingled bursting points of the Turkish and Bulgarian shrapnel. However, little by little, I make out some of the buttresses which underlie the trenches and works of the enemy, like a continuous semi-circle of smoke, constantly renewed by the explosion of shell after shell. I discover that these circles represent as many fronts of attack of different Bulgarian units, and count five different subdivisions, which are apparently five zones of attack, all side by side. My surmise is thus confirmed: The Bulgarians, enclosed right and left by the sea, cannot contemplate outflanking the enemy. Their proper course is to attack the whole front with equal force and when some weakness, some gap or other, eventuates in the enemy's line, to rush thither their reserves, enlarge the breach and push on to Constantinople.

I follow with interest the progressive march of the shrapnel, especially visible towards our right, from the side of the first army. It seems that over there they are attacking with vigor, for the intensity of the cannonading clearly increases towards the south, and in the valley of the Kara-Sou, as well as to the west of Hademkeui, the line of white becomes more dense.

All of us have our field-glasses fixed upon the right, absorbed in the contemplation of this slowly progressing sheet of flame and smoke, when over all the turmoil a mightier

roaring of a greater sonorousness surges in great waves from the valley below. It comes from the sea, or rather from the Bay of Tchekmedje, where a dense black smoke discloses the presence of warships. I am not able with the spy-glass to perceive but one of them, a large crusier, or perhaps a small armored vessel. Whatever it may be, this vessel is equipped with powerful artillery, for since its arrival the formidable and continuous rolling of its broadside dominates the more modest concert of the field pieces. I cannot tell what influence this fire has had on the march of the first army, but always from this moment the combat of this side seems to me to decrease, whereas it is carried on with unabated vigor opposite me and further to the north towards the left.

Directly before us, rise a series of works and trenches facing the village of Tchanaktcha, which is occupied by the Bulgarians, who, crouching in the ravines and the smaller recesses descending from the heights of Akalan, where we are stationed, make an effort to progress; some fractions of infantry succeed in getting a foothold on the left bank of the Katarchi. But the movement is soon arrested, and within the range of my field-glass I can distinctly see the Bulgarian soldiers in the middle of a terrain of ochre-like yellow, where a perfect hail of shells is plowing the ground on all sides. In the interval of two cannon shots, a sound of musketry comes from the valley, and mingling with it the characteristic cracking of the machine guns. Not only does the Bulgarian infantry not progress further, but it seems to me indeed that the units, especially some of the sections scattered over the yellow field, are not receiving any reinforcement, that they have been abandoned in their lamentable situation. It is apparent that the Bulgarians do not desire to continue the engagement here and that the bulk of the divisions, carefully sheltered from the hurly-burly of the fight, are pushing to the front only certain portions to establish contact * * * .

In the meantime, the Bulgarian artillery, which is relatively near us, opposes that of the Turks and endeavors, but in vain, to prevent the latter from annihilating the daring infantrymen. On the Bulgarian side, there are two entire groups of six batteries and, a little farther, all the heavy

groups of the 120 mm. installed on the brows of the hills to the west of Kastania. The Turkish artillery, visible only by its flashes of fire, seems masked by the variations of the ground to the west of Karadjali. It fires without ceasing partly on the infantry, partly on the artillery of the Ninth division about Kastania. Soon this last village is the prey of the flames; a thick smoke rises almost vertically to the gray heavens which are made yet more somber by the never-ceasing rain. In vain the heavy group attacks the artillery and even fires on it with explosive shells. When the black smoke of the melinite is dissipated, the brilliant flashes of the Turkish batteries reappear, scarcely interrupted, and the shrapnel again plunges into the valley. At length, everything in this corner gradually dies down; the firing is renewed only at intervals and as if unwillingly.

At this time, about two in the afternoon, interest is centered elsewhere,—to the north, on the outskirts of the village of Lazarkeui. I had already figured it out that it was from this side that the great attempt must be made, for everywhere else access to the enemy's position is difficult because of the swampy course of the Katarchi. Here, quite on the contrary, at the point of separation of the waters flowing to the Black Sea and the Sea of Marmosa, the progression is easy and is further facilitated by the short, valley-like depressions covered with brush. It is there of all places that we expect the Bulgarian forces to attack. A long chain of infantry coming out of the village of Lazarkeui, which has been occupied since nine in the morning, advances by small squads and takes as objective point the large fortified elevation about three kilometers to the southeast. This eminence is crowned by a barracks, which is surrounded by the vast maneuvers field, where two days ago I witnessed the Turkish exercises. On the occupation of this point, it seems to me, will depend the issue of the struggle; for the assailant, being master of the variation of terrain, may from there take in reverse and enfilade the whole of the lines of Tchataldja, which it completely dominates.

In the meantime, the Ottoman troops are not caught unawares, for a series of flashes illumines the gray sky every-

where in the vicinity of the barracks, and the shrapnel rains in the valley from Lazarkeui eastward. There again the Bulgarian infantry is arrested, although their artillery strives to locate the exact emplacement of the enemy's batteries of the barracks and to arrest their fire, but without success.

Soon the night comes on. It is five o'clock. The first day of the Battle of Tchataldja is finished. The Bulgarian infantry has gone forward, pushing small portions to the front and holding its masses in shelter at the rear. Almost everywhere, meantime, the chains of skirmishers have reached the foot of the eastern slopes, where they are entrenched within some hundreds of meters of the Turkish trenches. The artillery, which has seemed to me to give but timid support to the infantry, and which effected not a single one of those redoubtable fires known as "*tirs d'efficacite*" (fire after the range has been found), made possible by the modern rapid fire gun, has long since ceased, satisfied no doubt with having forced the enemy's artillery to uncover its batteries. To summarize, this first day has not impressed me as an aggressive offensive (*offensive mordante*), such as that which hitherto seems to have marked the Bulgarian tactics, but rather is one reminded of a series of pin pricks made with the purpose of aggravating the enemy and of feeling for his weak point so as to renew the combat with better chance of success the succeeding day.

I allow myself but one word of criticism; it is that this method of procedure does not appear to me to be without its faults, and the most serious of them is, in my opinion, that it leads the assailant to engage in a combat which makes no claim to being such, although it is desired to bring results. But the only result to be aimed at is the annihilation of the enemy; the only means to employ is to strike with full force at the front, whatever the opposing strength, until he demands quarter. The other way is nothing more than a sort of by-play, expensive in men and ammunition and unable to ensure a decisive solution.

As I think it all over, I turn for a last look before descending upon Akalan and Ermenikeui, and in front in the yellowish field where the Bulgarians foot-soldiers are im-

prisoned, I see two men running then fall; while over yonder a horseman rolls with his mount in a cloud of dust and smoke, never again to rise; and in the distance the shrapnel continues to stud with brilliant flashes a sky ever grayer and more depressing.

THE SECOND DAY.

When leaving for the front this morning, I learn that the Bulgarians have succeeded in taking by night attack three forts at the left of the enemy's line and, of special significance, the fort called "Fort No. 7." This one is situated almost across from the post of General Dimitrief and is the one which I discerned so clearly yesterday beyond the famous yellow field where the soldiers were buried under such a terrible artillery fire. Here, after all, I said to myself turning towards Akalan, is an infantry which has aggressiveness (*du mordant*), that aggressiveness the absence of which, intentional perhaps yesterday, had filled me with such pessimism.

Going forward, I meet a long column of wounded coming from the front, two and three at a time; they get along with great difficulty, some supporting themselves on a stick or rifle, some on the shoulder of a comrade less severely smitten. They are not complaining, but their febrile looks and drawn features betray their suffering. Some of them drop and can go no farther. One of them has died on the way, for he lies prostrate and motionless, eyes wide open and head turned towards the sky. Nearly all of them wear caps with violet bands, the shoulder straps of the same color being marked with the letter B, which is the Russian V. It is the 17th regiment of the Grand Duke Vladimir of Russia. I come across more than three hundred of them, a sad and unfortunate cortege, their desolation a heartbreaking evidence of the misery and bereavement that follow the battlefield.

It is raining incessantly, and the mist is so thick that it is difficult to see a hundred meters. And all the time, the cannon roars; it has scarcely stopped the whole night, they tell me. But I cannot help wondering how the gunners could effectively use their projectiles, whatever the exactitude of the fire, which at nightfall yesterday seemed to be more

than approximate. Lost in the depths of the cloud which folds its impenetrable curtain about me, I hearken to the thousand sounds from the valley. Not only is the cannon booming, but over all can be heard a violent and increasing musketry fusillade. What can it all be? Desperate at being able to see nothing, I slip away from headquarters and proceed haphazard in the fog at least to make an effort to observe something. I wander for a long time completely lost, sometimes near and sometimes distant from the echoes of battle and after a while a new column of wounded appears on the path I am following at the base of a "thalweg," and these latter present as melancholy an appearance as the first. These men belong to the regiment of Prince Boris and wear caps with yellow bands. I hurriedly consult my note-book, where I have written down the battle order of the Bulgarian divisions, and I find that this regiment, the fourth, forms with the 17th a brigade in the ninth division. But it is this division, they tell me, that attacked and captured Fort No. 7. But, seeing the firing redoubled and distinctly coming nearer to me, and watching these men who apparently had just emerged from the turmoil of battle, I begin to doubt the affirmations of Bulgarian success.

The rain now lets up and the clouds clear away. I return to the post of command, where the view is clearer and more extensive, and the first thing that strikes me is the persistence of the Turkish shrapnel in tearing up the ground between Fort No. 7, and the heights which separate us from it. Then the swarms of bursting shells clear these crests and in regular progression cover the ground beyond, descending into the little run (thalweg) where I had been just now, and climbing towards us. I must admit that there was some agitation around us. Serenity did not, at this moment, appear to me to be the dominant quality of the staff of the Third army. An ambulance stationed in a small depression in front of us received a couple of shrapnel, which threw its personnel into alarm. At the same time, a number of men of the Fourth regiment, all of them more or less wounded, passed on our flank and made their way behind. Exceedingly curious to know the cause of these different

movements, I betake myself to one of the staff officers who has always been very obliging in giving me information, and this is what I learn. The first brigade of the Ninth division had been given the day before as objective of attack Fort No. 7, which is on a hill to the east of Tchanaktcha. Upon its debouch from beyond Katarchi, it was compelled to stop, sharply checked in its advance by a terrible fire of artillery and infantry combined. It was there that I saw it yesterday, huddled in the great yellow field at the mercy of the shells. In the evening, about 10:30, it went to the attack and succeeded at fearful cost in entering the fortress and the neighboring trenches. Towards 2:30 in the morning, a first Turkish counter-attack endeavors to drive out the valiant Bulgarian regiments. The Turks are not successful in their attempt, but they remain until daybreak within about fifty meters of their opponents. At that time, the fog did not permit them to push further and they confined themselves on both sides to exchanging fire at close range. It was this lively fusillade that I heard just now in the mist.

When the fog lifts, the Fourth regiment suddenly finds itself in the following position, which it had unconsciously taken in the thick of the dense cloud that surrounded it, it is in front of the Turkish infantry and, furthermore, has on its left an entirely exposed valley which permits an unhampered oblique fire from the hostile artillery. This unfortunate regiment had already lost a part of its officers; the head of it, Colonel Kinakof, whose hand I had shaken two days before, is killed as I write; the men retreat in disorder and many of them remain upon the field. A part of the 17th is dragged along in this flight. The Turkish shells pursue them, go beyond the crest extending in front of us, cover the ambulance wagons which were in the shelter of a ravine with their splinters and encroach upon the slopes up to our station. It is evidently a critical time. But a brigade of the Fourth division, until then held in reserve, is immediately thrown in front and again establishes the equilibrium, pressing afresh upon fortification number seven. From that time, the battle goes on haltingly and indecisively, as slowly as yesterday; and the rain again spreads its gray veil over

objects and men, while the incessant flashes of the Bulgarian and Turkish pieces continue to punctuate the gloom with their luminous discharge. I leave the post of command without a great deal of regret but henceforth skeptical as to the substantiality of Bulgarian success and with the impression that, for this time at least, the Turks hold their own and hold it well.

A long conversation with Colonel Jostof during the repast at Ermenikeui leaves me with an even accentuated feeling of pessimism. Colonel Jostof, speaking to the four representatives of the French press, officially confirms the repulse of the regiment of Prince Boris. He then informs us of a fact we have long suspected and have even been able to report authentically but which the censorship had always prevented us from stating in our letters. I now inform you of it, trusting to a special and uncensored delivery. The dysentery is progressing with frightful rapidity, weakening the effective of the Bulgarian army and reducing it to an enormous extent. "So what are we to do?" asks the chief of staff of the Third Army inconclusively. He adds that, in all probability, the attack will be suspended tomorrow, which statement struck me as so surprising that I ventured to make him repeat it. It appears that the action will not be resumed for some days.

THE THIRD DAY: THE BULGARIAN OFFENSIVE BROKEN.

The cannon continues to boom in the distance, with such insistence, indeed, that I begin to think that, in spite of what the chief of staff told us yesterday, the battle is being carried on more energetically, that the endeavor must be more decisive. I am consumed with impatience at not being able to take my horse and get down there; but it is impossible to stir; we are under surveillance or practically so. The cannonade swells in the distance; we can also distinguish the duller but more prolonged shots of the men-of-war dominating the dry detonations of the field pieces. I master my impatience when to my great amazement I see General Dimitrief pass before the staff bureaux, and I believed him long since at the post of command. Had they by chance told

us the truth yesterday, and was this cannonade, despite its violence, only a make-believe, a kind of strategic fire across from the Turkish lines to keep the Ottoman troops continually on the *qui vive*, under the constant menace of an attack, so as to enable the Bulgarian soldiers to strengthen their dearly bought positions. Am I right? But how find out when one is held a prisoner. Meantime, all around headquarters, the wounded gathered from the front are arriving. They belong to the Third division which yesterday looked out on the northern forts. I manage with their aid to reconstruct what has taken place; and, having also talked with the chief of staff, I am able to give you the following version, which appears to me the most probable one:

The Third division had for objectives of attack the villages of Lazarkeui and Dag-Jenidjekeui, as well as the forts situated to the eastward. During the day of the 17th, the Bulgarian infantry progressed with comparative ease to said villages, which were taken at 10 a. m., but they had much difficulty debouching therefrom under a rather strong artillery fire. All this part of the fight, however, I had observed day before yesterday and have told you of it above. I was indeed astonished to see this infantry take its place on the ground so quickly, opposite an edge of woods beyond which the zigzag of Turkish trenches could be seen. Yesterday I was even more surprised to see these troops at exactly the same spot, although the battle had then been in progress thirty hours, when they had announced to us with much gusto in the morning the capture of the enemy's forts in this zone, particularly of Fort No. 2, which is at the end (debouche) of Lazarkeui. But this is what had happened. Like the Ninth division at the right, the Third had attempted some attacks at night and again at daybreak, in the midst of the fog; and had gained possession of the trenches in the middle of wood. A battalion of the twenty-ninth had even penetrated into Fort No. 2, an infantry work surrounded by wire. A bayonet fight then ensued between the two Turkish companies occupying it and this battalion. But because of insufficient support, and I cannot understand why this should have been the case, this battalion after a

time found itself without ammunition. At this juncture, threatened with a strong Turkish counter-attack, it was obliged to retreat at precisely the moment the fog cleared away. There was a blunder,—and on the whole a natural one,—on the part of the Bulgarian gunners, who fired upon their own retreating infantry. I was not explicitly informed of this fact, but the deduction was not difficult. This was followed by some confusion in the Third division, which reoccupied its position of the previous day, and I discovered it once more in the same place, as if it had never stirred.

But this setback coincided with that of Prince Boris' regiment in the center. The losses were terrible: I was told by one of the wounded that certain companies had lost all their officers, non-commissioned officers and nearly the whole of their effective. They told me of a company of the twenty-ninth which was reduced to thirteen men. So it is easy enough to understand the hesitation on the part of the authorities, who, seemingly assured the day before the fight of a mediocre resistance on the part of the Turks, found themselves face to face with a repetition of Plevna.

THE BULGARIAN REPULSE.

This last attempt, over which they had almost made merry two days ago, so easy did it seem in comparison with the tremendous engagements of Kirk-Killisse and Bounar-Hissar, was such as to cripple the offensive strength of two armies until then victorious and to leave the Bulgarians panting, breathless, spent. And yet I still maintain that this repulse could have been,—indeed, should have been,—avoided. At no time during the battle of Tchataldja did I see one attack,—a genuine attack preceded by a concentration of artillery fire and followed by a steady pressure of infantry. And why? Because, leaving out of the question of sickness, epidemic and the menace of cholera, from all of which the Turks were undoubtedly the worse sufferers, the Bulgarians have lost the "punch," the *elan* which up to this time has made them victorious. These men are played out. The impulse which had urged them on to Tchataldja might at a pinch have enabled them to reach Constantinople, on

condition that no barrier was interposed; but the Turks, constantly re-enforced by fresh contingents from the hinterland of Asia, seem to recover themselves in the face of the grave danger that threatens Islam. Yesterday not only did they hold their own (*fait front*), but they drove the Bulgarian regiments from the positions they had captured, and this performance in itself showed their true strength,—the veto which closes the gate of Stamboul to the exhausted Slavs.

* * * *

The Bulgarians have lost the Battle of Tchataldja.

The Turkish accounts of these actions are unsatisfactory and do not well agree with the foregoing.

There is one short account of the Turkish counter-attacks after the successful Bulgarian night attack that is interesting. I will read it as follows:

“According to a Turkish officer who was present at these attacks on what have been referred to as Forts 2 and 7, these were infantry redoubts or else trenches manned by Redifs. During the night the Bulgarians took them by a bayonet attack without alarming the Turks on the second line. Very early in the morning of November 18th, the major of the battalion garrisoning the next work thought he saw more men in that trench than had been there the night before. He thought that the position had been reinforced during the night, but as there was a thick mist he was not sure even of the increase in number and rode forward to find out. He was accompanied by two adjutants. One of them fell from his saddle, but the firing was becoming general and the major attributed it to a chance shot. The fact that the trenches were occupied by the enemy did not enter his head. He rode on until he heard men speaking Bulgarian. At the same time he was wounded too. He and his adjutant immediately galloped back to give the alarm. At once all the guns that could be brought to bear were turned upon these trenches and the ground back of them; this soon included the warships off Derkos. After sufficient artillery preparation the Bulgarians

were attacked and driven out with heavy losses on both sides, one Turkish battalion losing fifty per cent. The men who took part in this action saw a massed Bulgarian force ready to advance over the trenches and through the Turkish lines. If the major had not been of an inquiring turn of mind and had not gone forward the Turkish line would have been pierced and it is not in the least improbable that this officer saved Constantinople."

Some additional information is on hand in regard to the Bulgarian supply lines.

The Second Army of course depends on the railroad. As the latter runs through Adrianople a line of supply has been organized around the town for the troops sent forward. This line leaves the railroad at Kadikioj, runs south to the Arda River which it crosses at Semenli, follows up the Arda and crosses the hills to Ortakeui thence by a good road to Demotika. Motor trucks and automobiles are used on this latter sector. Carts drawn by bullocks are used between Ortakeui and the railroad. Much of the section was a bad road but it has been corduroyed in the marshy sections in the valleys. It will be noted that the loop around Adrianople is about forty miles long. Mountains south of the Arda make a short route impossible.

The First and Third armies were and still are largely based on Jamboli. The line from Jamboli to Kizil Azac is operated by motor trucks. From Kizil Azac to Kirk-Killisse by bull or carabao carts. From Kirk-Killisse to Tchataldja the railroad is used, supplemented by bull carts.

From all accounts these bull carts have given splendid service. They are four wheeled country vehicles drawn by two bullocks or carabaos. The latter are much like the Philippine carabaos, but are less dependent on water.

Each cart carries about 1,000 pounds and they have been used in great numbers.

The following seems to be the situation at the present date:

The Second Army now composed of the eighth and eleventh divisions and two Servian divisions are besieging Adrianople. The Turkish garrison seems to be some 30,000 to 40,000 men.

Originally it is believed they had supplies for about three and one-half months. An added source of supply has been suggested by the fact that the town is the center of a great cheese making and export industry and that there was present at the beginning of operations a large quantity of cheese that had been made but not yet sent away. Be that as it may, it would seem that all such supplies would have been necessary for the civilian population (80,000) and that the garrison must be approaching the end of its supplies.

The Bulgarians have never made any serious effort to take the place, but a Bulgarian general officer has been quoted as of the opinion that the place could be taken in short order at a sacrifice of from 5,000 to 10,000 men.

At the Tchataldja line the Turks now have about 350 guns in position and about 140,000 to 150,000 troops. Work strengthening the position has continued since the last of November.

On the Bulgarian side the force is probably as great in men and there are two divisions, the Second and Seventh, available to reinforce this line or the Adrianople besieging force. Defensive works have no doubt been constructed and the work of strengthening them has continued to date.

The Turks still hold Scutari on the Montenegrin frontier with a force of about 7,000 men.

At Janina and vicinity the Turks are supposed to have 30,000 to 40,000 men and to the present date the Greeks have been unable to accomplish anything effective against them. This is explained by the difficult nature of the country covering the approaches to Janina. These approaches are strongly fortified and are in the hands of the Turks, who still hold enough of the surrounding country to keep themselves supplied.

Now that the war has been renewed it would seem reasonable to expect the early capture of Adrianople and Scutari while Janina would eventually also be taken.

At Tchataldja it would seem that any operation would result in a checkmate for either side.

A solution giving effective results would then necessarily be sought elsewhere. With the Greeks commanding the sea

this would seem to point to operations to capture the forts of the Dardanelles. Operations on the European side would seem simple enough but on the Asiatic side the Turks have already some 50,000 men ready to defend the ground south of the Dardanelles.

The next available point for operations would be Alexandretta Bay. Successful operations from this point as a base might have very pronounced effect both military and politically and any attempt to forecast what might happen would be a rash performance.

LAVA.

(The Famous Cossack Attack. As adopted in 1912, for the first time, by the regular Russian Cavalry.)

BY CAPTAIN N. K. AVERIILL, U. S. CAVALRY, MILITARY ATTACHÉ.

A DISCUSSION of the Lava, the old and famous national attack of the Cossacks, should be of the greatest interest to our service for two reasons: First, it can be compared to the extended order work as used by us; secondly, this method of attack has been deemed of such value by the largest cavalry force in the world that it is now adopted, for the first time, by the regular cavalry of Russia.

Based on the experience obtained in the Russian-Japanese War, and as the result of experiments covering several years, the cavalry of the Russian Army adopted in 1912, a new drill which contains several new features, none of which are more marked than the Lava.

The adaptation of this Cossack method of attack to the Regular Cavalry proved to be rather difficult, for the Lava was originally but little more than a disorderly, savage, mad rush, easy perhaps for irregular troops, but a problem to be carefully solved for the Cavalry of the Line. This has been done in the new system of tactics in what appears to be a most satisfactory manner.

The original Lava, the national tactics of the Cossacks, consisted in a variety of formations, in line, in column, in close or extended order, and mounted or dismounted; the action was either mounted, on foot, or both. These, the general features of the irregular attack, have been described in the new drill as general rules or principles only, no hard or fast rules are prescribed; simplicity is the keynote of the drill, and independence and initiative the keynotes of the action.

The chief elements of success in the Lava action are the careful training of the single man and horse, and of the

platoon—the basic unit of all Russian drill. A firm conviction must be impressed on all; that there is but one action in a fight—the offensive; to always close with the enemy with but one aim—to kill and destroy as many as possible, with the rifle, the lance, or the saber as the case may be; but always to strike, to disable, or to capture the foe.

The platoon is under a chief who must train his men to obey all signals and signs, whistles, whispered commands, flashes from an electric pocket lamp at night, etc. They must be able to follow him in all formations, close or extended, and must have a mobile and rapid power of change to any column or to any line at all gaits. The good training of a platoon requires constant hard work on varied ground, by night as well as by day.

Once the platoon is trained, the work of the squadron (troop) in Lava is easy. The only means of success however are constant practice, frequent operations on open ground, and continual use of signals, signs, etc. The same remarks apply for the work of regiments and larger units.

Having thus outlined what is meant by the action called Lava and the training incidental thereto we can take up the system of tactics as now adopted for this action in the new Russian Cavalry Drill of 1912.

LAVA ACTION.

Lava does not represent a formation, but a tactical action of cavalry without definite forms or construction. The troops engaged in Lava take the order most promising of success on that especial occasion. The success of the action depends almost entirely on the presence of mind and the shrewdness of the chief, and of all the men of whatever rank engaged therein.

Lava requires a certain independence on the part of each man, the actions of whom are united by all seeking to achieve the *common aim*, which must be distinctly clear to each. All must pay the strictest attention to the leader, to his signals or commands.

For a successful Lava action the following are required: excellent individual training of the man in the management

of the horse and in the use of his arms; the development of shrewdness, a willingness to take responsibility; the proper means to the end must be chosen by the chief and the men so well trained that the meaning of each signal will be clear to all.

Any tendency to carry out Lava on the line of regular formations or to bind it by distances or intervals is fatal; for such would kill the independence of the groups and would destroy the very meaning of Lava, which will only be successful when confusing to, and unexpected by the enemy.

Lava can be applied in the following cases:

- a. To disorganize, prior to attack, the enemy's troops when they are in close formation.
- b. To lure the enemy to a position or a line favorable for attacking him.
- c. To prevent the enemy's scouting.
- d. As a screen to cover the movements of its own troops.
- e. To reconnoiter the enemy's position.
- f. To delay the enemy's advance.
- g. To entice the enemy in range of a sudden fire from its own hidden forces.
- h. To carry out special scouting.
- i. To pursue and outflank a retreating enemy.
- j. To break through the sentry lines and harass the enemy at rest.

The use of Lava against infantry is generally limited to scouting.

For the final result of the Lava, shock action in close order is essential, for which reason the chief using Lava must always have a section in close order at his disposal, ready at any moment to charge the enemy and complete the disorder already caused in his ranks. All sections of Lava must always remember to strike strongly in close order, and therefore in advancing to the charge all close by platoons and squadrons. A victory can only be expected when the blow is struck with all power in close order.

Firing mounted is permissible only in extended order, at a halt, and is only useful when directed against large

cavalry bodies; to fire from horseback against infantry is not permitted. In Lava the use of machine guns may be of the greatest benefit, enabling it to occupy and fire from places best suited to defeat the enemy.

Lava by Squadrons (Troops).

The Lava of a squadron consists of the Advance Forces and the Support. In exceptional cases all four platoons may be moved out as the advanced force, but a squadron acting alone must have a platoon as support. If all platoons should be used as advanced forces then in place of the support a "vedette" is left, consisting of the 5 or 6 men of the first section of the third platoon. The standard remains with the support or the vedette.

The platoons of the advance forces disperse into two groups under command of the right and left flank N. C. O's, according to the battle conditions; communication between the groups must however be maintained. As long as the order for deployment has not been given, the groups march in the most convenient manner. On the command for deployment the groups extend in single rank, the intervals between the men depend on the object of the action and on the ground.

The support is posted, in any formation as desired, where most useful, the distance from the advance forces depends on the conditions of the battle and of the terrain, but must be such as to guarantee the rendering of timely assistance. The vedette, if there be one, is posted according to the orders of the squadron commander, and if no place be designated then behind the center of the squadron at 100—200 paces from the advance forces.

Posts of Officers.

The post of the squadron commander may be anywhere as most convenient; he may be in front or in rear of the line of groups, but for the charge he must always move to the front and collecting his squadron he leads it in person.

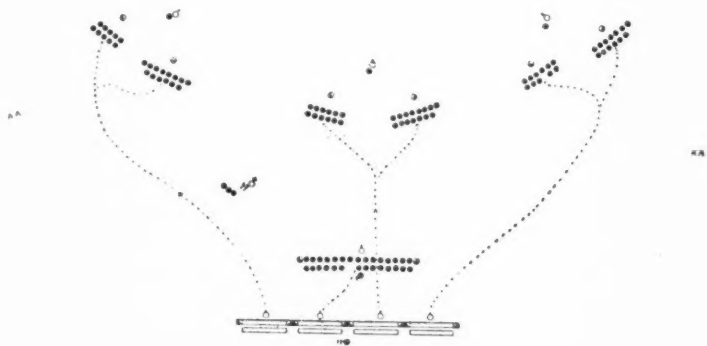
The extra N. C. O's and the second trumpeter ride up to the Captain to receive and transmit his orders.

Platoon commanders remain with their platoons and move forward to a place where they can best superintend their groups. A selected private is attached to each platoon commander to act as his messenger.

Group leaders take such places as are best suited for them to command; usually at the first formation they are

CONVENTIONAL SIGNS.

○	Squadron commander.	●	Private.
○	Platoon commander.	~~~~~	Dismounted men.
⊕	Sergeant.	xxx	Horse-holders.
●●	Plank N. C. O's.	^^	Patrols.
†	Trumpeter.		



CUT No. 1.

THE FIRST FORMATION IN LAVA—BEFORE THE GROUPS ARE EXTENDED.

two paces ahead of their group, if in close order, and ten paces, if extended.

The sergeant major (1st sergeant) is with the support, or if none then with the vedette; one trumpeter always remains with him.

The accompanying drawings will indicate the formation and posts in the initial dispersion of the Lava, the groups being not yet extended.

The movements of Lava and the first ordering out of the same.

Lava can be ordered from line or column, to the front or to the flank; to order it out with a change of direction the squadron in close order will previously take the required direction and will then disperse into Lava.

Lava is generally formed by moving the groups forward; if necessary to form it on the line occupied, the command "On the Line" is added, in which case the platoons appointed for the advance forces move to the right or left from base platoon, and the platoon designated as the support moves to the rear. Should no base platoon be designated the 2d platoon from the right acts as such. To determine the direction a certain object is named.

To form the Lava but one command is given as follows:

1. Squadron to Lava.
2. Such Platoon the Base.
3. Gait.
4. March.

If no gait be indicated then from the halt the Lava is formed at a trot, or at an increased gait if moving.

At the command of execution the base platoon moves forward, whether from line or column; the other platoons of the advance forces extend to the right or left, after gaining their intervals they disperse into groups and move forward until the signal halt is given.

After the groups have taken their places on the line they are deployed at the signal or command of the squadron commander: "Extend;" if necessary they can extend on the order of the platoon or group commander. If no gait is indicated the deployment is at a trot from the halt or at an increased gait if moving.

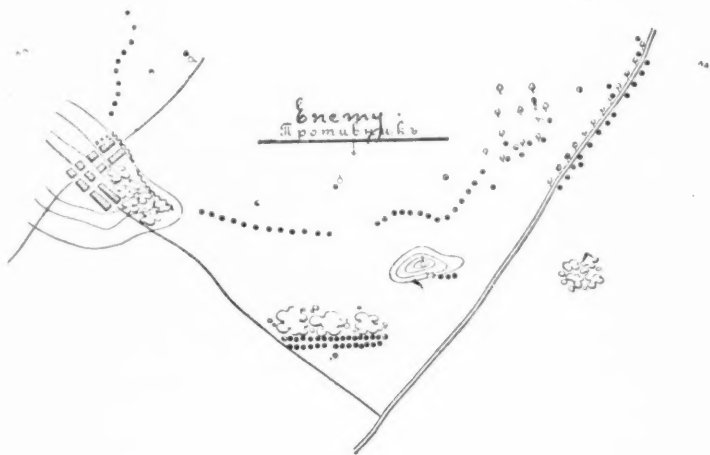
No dressing in the groups nor any keeping of exact intervals is required. The leaders watch that the squadron keeps

the direction as ordered, which is facilitated by the appointing of a base platoon and in this of a base group. The wings of the Lava generally move somewhat in advance, to enable them to outflank the enemy.

If, owing to battle conditions or lack of time, it is necessary to deploy the groups at once the command: "Extend" may be added to the command for forming Lava. In this case the groups of the platoons ordered to the advance forces deploy while marching.

At all movements in Lava the groups may extend or close independently according to the circumstances and as desired for more successful action. In general the groups are free in all their actions and in the use of the ground; they may be: one group in extended order; the next, mounted in close order; the third, dismounted to fight on foot, either in whole or in part.

Cut 2 shows the action of a squadron in Lava.



CUT No. 2.
SQUADRON IN LAVA ACTION.

In this illustration three platoons are ordered as advance forces. On the right flank is the first platoon, some trees permit several men to approach quite close to the enemy and harass them with rifle fire while remaining mounted. In the center is the 2d platoon deployed. On the left flank is the 3d platoon, one of the groups has dismounted and occupied the edge of the village, the other group is extended, mounted, still further to the left. The support is stationed under cover of the woods in rear of the center. The squadron commander takes post on the hill from where he can superintend the action of the entire squadron. Should the enemy move to attack the center, the 1st and 3d platoons will close and attack his flanks and rear; the support and the 2d platoon will attack his front.

Patrols are sent out from the flank platoons of the advance forces and from the support by the commanders of the same without waiting for special orders therefor.

Lava Fire.

Fire is opened in the Lava on the command of the platoon commanders. Fire action should usually be dismounted, if used mounted the best individual shots are selected; firing by groups or platoons is only used dismounted. A corporal or a selected private commands the horse holders. The trumpeters do not dismount. Dismounted action is used against an undecided enemy and when there happens to be suitable cover at hand as for example: houses, outskirts of a village, edge of a forest, etc.

The commander of the squadron, platoon or group designates which section is to dismount. The signal or command being given the men dismount and run forward to the position indicated.

Use of Lava.

No exact instructions on how to act with Lava on each occasion can be given. Some movements only can be indicated, the using of which under the varying conditions of battle is a matter of skill, presence of mind and correct military judgment on the part of the commanders.

As the success of the Lava action depends on the independent action of each man, all, even the private soldier, must know the object and the proposed means of accomplishing the same. To succeed the Lava must act not only daringly and impetuously, but even rashly and insistently; it must seize the enemy's flanks and rear, even if this requires a considerable separation from the main forces.

Lava may fire mounted from an extended line, it may dismount and open fire on an approaching enemy, or if the latter be extended it may close by groups or platoons and charge in close order. The enemy may be lured to approach, he may be drawn away from his forces, his advance obstructed or delayed. If weaker than the enemy the Lava may avoid his attack. While hovering around the enemy the Lava tries to destroy all his convoys, the protection for his flank and rear, and his scouts. All communication between the enemy's forces must be intercepted by the capture of his messengers. The Lava forces must worry and harass the enemy incessantly, they must stir up his columns and bring disorder in his bivouacs; by their bold acts they will thereby benefit their own forces.

For a simultaneous attack against the front and flanks* of the enemy, if he be in closed order, the method used is called: "Closing by the Wings," and is executed as indicated in Drawing 2. The platoons of the advance force in order to gain space and to confuse the enemy begin to retreat on divergent lines. On having thus uncovered the support they quickly turn and rush to the attack of the advancing enemy, always closing on their march. On such occasions the flank platoons attack on the flanks and the center platoon joins either the support or one of the flank platoons.

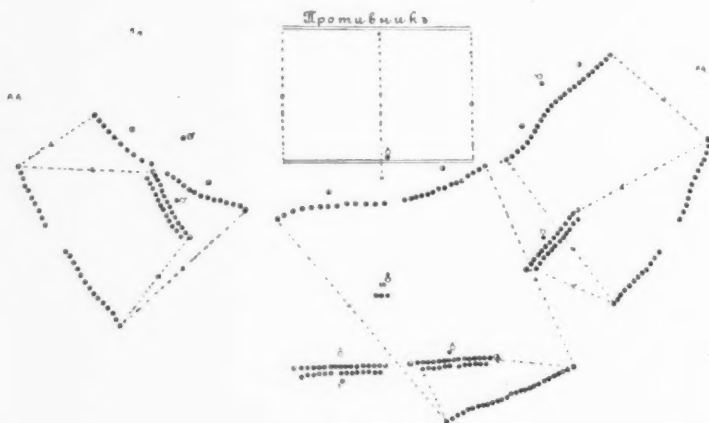
This movement may be executed on some occasions without any previous retreat, either on the line of groups or by a movement forward.

To lure the enemy on, part of the Lava approaches as near as possible to his forces in close order; if he be provoked to attack the Lava immediately turns and hurries off at an always increasing gait, trying to bring him into range of fire of its own forces or machine guns lying con-

cealed, or within striking distance of a portion of the Lava rapidly rallied on a flank. Should these contingencies happen the fleeing Lava quickly turns, closes and rushes to the attack.

In reconnaissance the utmost stress is laid on the quick delivery of all reports.

The whole idea of the Lava is based on the offensive. It must miss no opportunity to fall upon the enemy either with part or all its forces, and it must try to hit him in the most vulnerable spot. The entire squadron on the signal



CUT No. 3.

CLOSING BY THE WINGS—SQUADRONS IN LAVA.

or command of its commander, or the separate platoons or groups on the command of their leaders charge with the cry "Hurrah!" Quickness and impetuosity for such sudden attacks are the only pledge of success.

Rallying of Lava.

The Lava is rallied in three ways: (a) on the squadron commander, in column of platoons, on the signal: "Rally;" (b) on the squadron commander, in line, on the signal: "On

the Front Echelon;" (c) on the support or vedette, in line, on the signal: "Recall." The gait for all rallying is the field gallop unless otherwise specified. In cases where the enemy is numerically stronger, or it is wished to deceive him, the forces in the Lava may retreat separately and rally at some other and more distant place as previously agreed upon.

Use of Lava by a Regiment.

From a regiment one or several squadrons are sent out for Lava action; the others remain in close order and form the reserve. The number of squadrons sent out for Lava depends on the battle conditions. The squadrons so sent out act independently in Lava according to the rules given for the squadron. The reserve takes position, according to conditions and the ground, where it can best support the advance forces, or suddenly charge the enemy; it may be at a considerable distance from the advance squadrons, in rear of the center, of one or both flanks, or even beyond the flanks.

The manner of using the Lava by the squadron will apply when it is used by the regiment with the following supplementary instructions:

1. Each of the squadrons ordered out to Lava has its own special section or zone, and must keep up communications among themselves.
2. The regimental commander directs the action of the regiment, and takes post where he finds it best. On ordering part of the regiment out to Lava, the adjutant, two trumpeters, an officer and an orderly from the reserve, and two picked privates from each squadron in the advance forces report to the Colonel as messengers.
3. One of the field officers commands the reserve and the others are given tasks as desired by the regimental commander. If they are assigned to command the squadrons in Lava, then, besides the trumpeter, one private from each of their respective squadrons is attached to them.
4. The common task of the regiment is explained to each field officer and to each squadron commander. In accordance with it they act independently, watch the enemy

and maintain continuous communication with the regimental commander, for which purpose special men are designated.

5. The machine guns may be attached by the regimental commander to the parts engaged in Lava.

6. The regimental commander directs the Lava by means of orders. The right to give the trumpet signals belongs to him alone, these calls must reach the advance squadrons and are repeated by all the trumpeters.

7. As the Lava of several squadrons may extend over a considerable space and as it is impossible for the regimental commander to watch all that takes place, it is the special duty of the squadron commanders to keep him informed of all changes in the battle conditions and of all new information regarding the enemy.

8. The charge of the entire regiment is ordered by the commander thereof when he finds the conditions favorable.

9. On having decided to attack with the whole regiment, the regimental commander sends the necessary orders to the squadrons engaged in Lava and leads himself the reserve to the charge. On receiving the order, or on seeing the reserve advance to the attack, the parts engaged in Lava uncover the front and at a full gallop rally on the flanks, closing during movement by platoons and squadrons, and aim to hit the enemy's flank and rear at the same moment the reserve strikes. Platoons which see that they will not be in time to reach the enemy's flank join the nearest flank of the advancing reserve.

10. If the attack be a sudden one from ambush on the enemy's flank, then the parts of the Lava do not rally on the wings but by squadrons and charge on the points deemed best, taking care however not to block the front of the reserve moving to the attack.

11. The Lava either to the front or to the flanks can be called from all formations by the one command of the regimental commander:

1. Direction so and so; Such Squadron the Base; Such Squadrons to Lava.
2. Gait.
3. MARCH.

On this command the squadrons indicated move out to Lava, take intervals and disperse basing their movements on the base squadron. The squadrons for the reserve move toward the place indicated by the shortest route.

Prior to ordering the Lava the regimental commander *must* indicate to the squadron commanders the width of front that the Lava is to occupy. Three squadrons in Lava occupy a front up to three or four versts and four squadrons up to five versts (one verst equals two-thirds of a mile).

The Lava of a regiment rallies on the reserve on the orders of the regimental commander which are delivered by orderlies; or in case he orders the trumpeters to sound the "rally," all those that hear the same must obey at once and all trumpeters repeat the call.

LONG MARCHES OF INFANTRY AND CAVALRY IN FRANCE.

BY AN OFFICER ABROAD.

THIS is the season when French troops begin to show results from the progressive training which begins with the arrival of recruits in October and ends with the maneuvers in the summer and fall. A regiment of infantry, the Seventh, has just shown what it can do. The first "*test marches*" took place February 14th, 15th, 16th and 17th. These are made under campaign conditions and all available recruits (who joined last October) must make these marches. The regiment marched with an effective strength of 1,376 men. On March 8th and 9th, in the space of twenty-four hours, the regiment, with 1,347 men, marched thirty-seven miles. On April 5th, 6th and 7th, in the space of 48 hours, the regiment with 1,380 men marched sixty-two miles.

For this last march the regiment was detrained at Bar-le-Duc under the supposition that it was to make a rapid march to Nomedy, escorting the corps artillery, to enter in a battle already commenced, distance to go sixty-two miles. The regiment left Bar-le-Duc at noon, April 5th, and reached Nomedy before noon April 7th.

Major General Bruneau, commanding the division to which the Seventh Infantry belongs, decided to show that he was not unworthy of his troops in the matter of physical endurance. He rode from his headquarters to the camp of the Seventh infantry, arriving at 7:00 p. m., April 7th, the day the infantry made its last march. He started at 1:00 p. m. and reached the infantry camp at 7:00 p. m., when a call to arms was made and the regiment assembled ready to march. The men were then dismissed. The next day General Bruneau supervised field maneuvers of the regiment

at 6:00 a. m., after which he returned to his headquarters, reaching them at 1:00 p. m., He had ridden seventy-eight miles in the twenty-four hours.

The general was accompanied by his chief of staff, a sergeant and two privates of his escort.

Cavalry reconnaissances have also taken place, in both the regular, active cavalry and in the reserve.

Orders were issued from the war department for officer's patrols from twenty-seven regular cavalry regiments located not more than 200 miles from Paris, to send out of each regiment a patrol consisting of one officer, one sergeant, and four other men, who were to reach Paris in three days time, by various routes. The distance to be covered by each patrol each day was fixed at sixty-two miles. Every man was to ride his own horse, in campaign uniform with saddle packed as in campaign, but no ammunition, rations, carbines, lances or cuirasses were to be carried.

All classes of cavalry were represented: cuirassiers, dragoons and light cavalry.

The conditions required all the men constituting a patrol to arrive, otherwise they would not be classified.

The following list* gives the names of the officers commanding patrols, their regiments and the remount depot from which the horses came when assigned to the regiments (several years ago, of course). This last item is watched with interest as there is great rivalry between the various remount depots and the districts which furnish horses to them.

No horse under 8 years was allowed to be used, and each horse must have taken part at least once in the grand maneuvers.

Patrol commanders were allowed complete liberty as to the conduct of their reconnaissances, halting places, etc. All patrols were to start at 9:00 a. m., April 8th, and at or before 9:00 a. m., April 11th, they were to report at the horse-show building in Paris, where they would be inspected and then passed in review and examined at the three gaits in the ring.

*List of officers, etc., omitted as being of no particular interest to our readers.—EDITOR.

Twenty-five of the twenty-seven patrols arrived on time and intact. There was no race. After arrival, the first and second prizes were awarded those two patrols having their horses in the best condition; other honorary prizes were distributed.

One patrol had a horse go lame and did not finish the 186 miles; the patrol of the First cuirassiers had a horse fall sick of colic the second day; the patrol remained with him and lost nearly a day. Finally they left the sick horse and in order to make up lost time and arrive at the hour designated, this patrol rode during the last twenty-four hours of the contest eighty-eight miles. Men and horses arrived in good condition.

A detailed account of the ride of this patrol is given in the "*Revue de Cavalerie*" for June, 1911, and is worth reading.

In the first two days, ninety-eight miles had been covered before the sick horse caused a halt.

The itinerary for the third day is as follows: Left camp at 8:30 a. m. Gait of twenty minutes at the trot—slightly slower than the regulation gait,—the horses given their heads, reins long; then ten minutes at the walk, the men on foot at their horses' heads. Going up and down hills, the men on foot.

At 11:15 a. m., halt for ten minutes, horses watered and the men ate a sandwich. They doubtless started after the usual French custom, having had only a cup of coffee and no food.

From 11:25 a. m., to 2:00 p. m., same gait and method as above.

From 2:00 to 2:45 p. m., rested. Horses watered and fed. Men fed.

From 2:45 to 6:00 p. m., marched the same as before—walk and trot.

At 6:00 p. m., halted for ten minutes, horses watered and the men ate a bit of bread.

From 6:10 to 9:00 p. m., marched as before.

At 9:00 p. m., arrived at cantonment. Horses groomed, watered and fed.

At 10:00 p. m., we get supper and at 11:00 p. m., went to bed.

Reveille at 3:00 a. m. Horses watered, groomed and fed lightly.

At 4:00 a. m., the march was resumed.

At 8:10 a. m., halted for twenty minutes at St. Cloud; men clean up their uniforms and boots.

At 8:30 a. m., start for Paris and arrive at the Inspecting Station at 8:45 a. m., where the horses and men were inspected and passed.

I saw this patrol, as well as the other twenty-five, in the afternoon in the horse show ring at the walk, trot and gallop, and they gave no particular signs of fatigue.

The following are the weights lost in the three days: Officer—eight and one-half pounds; sergeant—three pounds; the four men—from one to four and one-half pounds; officer's horse—thirty-five pounds; mens' horses—from thirty-four to fifty-seven pounds.

The horses were all from nine to eleven years old and stood from fifteen hands and two inches to fifteen hands and three and one-half inches. Each horse had one grand parent a thoroughbred. Four were mares and one a gelding. All were Normans. There were no sore backs. Of the eighty-eight miles, twenty-five were made at a walk, the men on foot, the rest at the trot.

I saw all of these twenty-five patrols the day of their arrival, and the condition of both men and animals appeared to me to vary from satisfactory to excellent. They moved around the horse-show ring at the three gaits for an hour, and one could readily form an opinion of the physical condition. Many of the horses seemed as fresh and eager as if they had not done a hard journey. All were excellently groomed and the leather and equipments perfectly clean. During the reconnaissance the men of course had cared for their horses and for themselves more or less as on service. Not a horse was missing and not one was lame or in any way unserviceable.

As stated above, this was not a race. No patrol arriving at the gates of Paris was allowed to enter before 8:00

a. m., April 11th; the sole requirement was to do sixty-two and one-third miles each day for three days, and arrive with all the men and all the horses in thoroughly good condition ready for a further effort. This was accomplished, and the French cavalry has once more shown that its horsemanship, its ability to make long distances without hurting man or beast, is of a high order.

The following are the official rules published by the War Department governing these reconnaissances:

The War Minister is having the following notice, regulating the conditions of the endurance ride in question, reach the cavalry corps.

* * * * *

Composition of parties.—Each regiment will furnish a detail composed like one which constitutes an officer's reconnaissance in the field, being as follows: 1 officer, 1 non-commissioned officer, 4 scouts (or 1 corporal and 3 scouts).

Selection of horses.—The horses should not be less than 8 years old and have at least once taken part in the autumn maneuvers. Each regiment should be stocked from the same remount depot, exception being made in the case of officers, who can ride their army horses.

Equipment.—It shall be the field equipment without ammunition, nor rations and without breastplates, carbines and lances. Cuirassier regiments will take such measures with their outfits so that they may be able to find their armors at the Grand Palais, for the exhibition to take place on the evening of arrival.

General condition of test.—The test is not to be a race. It will consist in covering a distance of 300 km. in three days, or more exactly, in 72 hours, at a free gait. Patrols arriving within the stipulated time and whose effective strength will be complete and intact shall have a right to prizes.

Itineraries.—The routes shall be laid out for all parties by the committee on organization and communicated to them at least 15 days before the start. They must be strictly followed under pain of disqualification and will allow several points of obligatory control.

The start.—The start is to be made by all the regiments on April 8th, at 9:00 a. m. (Railroad time), at the responsibility of regimental commanders. The officers will regulate in their judgment the length of the stops, they will select the halting places and will have to provide in their own way for quarters and subsistence of their command. Patrols abandoning the test during the ride and commands not arriving at the terminal point in their entirety must be disqualified; every accident preventing the rider or a horse from continuing the test will force the abandonment of the trial by the whole squad, which must return to its garrison. Officers in charge of the patrol must report by telegraph to the president general of the commission (Horse Show, Grand Palais).

Arrival.—The committee checking up arrivals will be placed at the fortifications, at "La Muette entrance" (at the extreme west of Avenue Henri-Martin). Patrols will go from there to the Grand Palais. The march through Paris shall be made indifferently. No party is to present itself at the board of control of arrivals before nine o'clock in the morning of April 11th. Commands arriving in the afternoon will proceed directly to the Grand Palais.

Examination of horses and disqualification of patrols.—Directly after arrival at the Grand Palais, all horses will be examined by a delegation of the commission. Every horse that is broken-kneed, lame, or has a serious sore on its back, in one word, is not in a state to continue its service, will involve the disqualification of the command to which it belongs.

Stabling of horses.—All horses will be kept at the stables of the Horse Show, where the feed will be prepared in advance by the attendants of the commission.

Public exhibition of patrols not disqualified.—On April 11th, at 4:30 p. m., every party that has been favorably judged will pass in review at three gaits over the tracking of the riding school.

Prizes.—The "Matin" has placed at the disposal of the commission the sum of 10,000 francs intended for prizes to be awarded to the patrols admitted. To these that have arrived at "La Muette" checking station between nine and ten o'clock, will be given a prize of the first class. Those arriving between ten and eleven o'clock, will receive a prize of the second class. All others coming after eleven o'clock, but before four o'clock, will be given a diploma as a souvenir of the effort. The first and second class prizes will consist, for officers and non-commissioned officers, of objects of art, or of medals modeled after those of the French Horse Association, bearing the motto: "Endurance Test of 1911," Prize offered by "Le Matin." The corporals and troopers will receive a savings bank book and a medal.

Allowances.—There shall be prepared for every patrol, in the name of its regiment, a voucher giving the right to regulation allowances, for the entire journey; these allowances shall be paid from credits allotted for expeditions of a long distance.

Return to the garrisons.—Patrols having to cover more than sixty kilometers to reach their station shall be carried by railroads. The same provision shall apply, if needs be, to commands having been obliged to abandon the test while en route.

Composition of committee of organization and examination.—The committee will be made up of General de Lagarenne, commanding Sixth Brigade of Cuirassiers, president; Lieutenant Colonel Ferte, First Cuirassiers, and Veterinary Surgeon Sandrin, director of Second veterinary jurisdiction, members.

Reports to be submitted.—The regimental commander will send directly to the president general of the commission before March 20th, a list of the officer, non-commissioned officer and of the troopers (or of the corporal and horseman) that are to take part in the ride, as well as of the horses; in the case of the latter, there will be furnished a statement of the precise age, a pedigree (giving as well as possible two generations back).

Until the eve of departure, it shall be possible to change the formation of the patrols; it will be especially possible to substitute one or several of the horses entered on the list, with the reserve that those which shall be placed in stead must fill the requirements exacted.

Modification must be reported as urgent to the president general of the commission.

MAURICE BERTAEUX,
The Minister of War.

Another riding test for officers of the second line, corresponding to our National Guard officers, was gotten up by the newspaper "Le Matin" with the consent and authority of the War Department. The "Matin" offered prizes, established control stations and made all arrangements for the ride. It was open to all officers of the reserve, and 203 took part. They were of all ages, all grades, all professions and trades, and rode every imaginable kind of horse, from first-class hunters to the sorriest nags.

The conditions required contestants to ride in uniform, but with little baggage on the saddles and no arms. Each man had to make thirty-nine miles a day during eight days. After the fifth day, one day's rest was prescribed. The total distance was 310 miles. It was required that when at any examining station a horse was found lame, suffering or too fatigued to continue, he must be dropped at once from the contest.

Of the 203 officers who started, 180 made the distance and arrived in good condition as to man and horse.

The riding was done on the ordinary roads, and itineraries were prescribed and necessary arrangements made for verification.

The horses ridden were owned, borrowed or hired by the contestants, as would be the case in war, when these officers would be mounted on requisitioned horses. The results were really unexpected and showed both pluck and physical condition on the part of men entirely out of training. There were doctors, veterinarians, lawyers, farmers, merchants and barbers, infantrymen as well as mounted branches represented in the contestants.

THE INDIVIDUAL TRAINING OF THE RUSSIAN TROOPER.

(Notes on the new drill of 1912, for individual training.)

BY CAPTAIN N. K. AVERILL, U. S. CAVALRY, MILITARY ATTACHÉ.

THE new Russian Cavalry Drill Regulations of 1912, is divided into two parts; the one, the drill proper, beginning with the platoon as the smallest unit, the other, the individual training; the latter is called Part I, and the former Part II, of the Regulations.

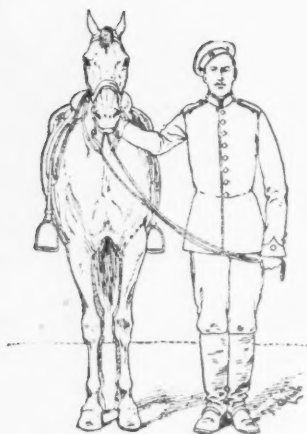
The Russians consider the individual training to be the basis of all preparation for battle action; that modern warfare demands a large independence of action on the part of each man; and that men properly trained as individuals will very soon become accustomed to common action in close order. Particular emphasis, in all drill by squads, is laid on sustaining the interest of the men by various exercises and movements calling for individual execution; to this end special importance is laid on each man riding separately, and no one man is ever long in the lead in squad work.

CHAPTER I.—RULE FOR RIDING.

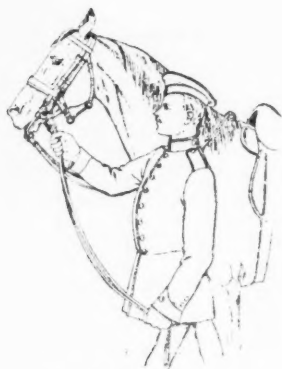
The manner of holding and leading the horse is shown in Cuts 1 and 2.

If armed with the saber, the scabbard is carried in the left hand, if with the lance the same is carried on the shoulder left point up.

The first point of special interest is the the use of the curb bit without chain in the beginning of the training and even when training young horses. The use of the snaffle alone is permitted only during the first two or three lessons. The chain is only used after the riders acquire a certain assurance, cease to use the reins as a means of support, and



CUT No. 1.



CUT No. 2



CUT No. 3.



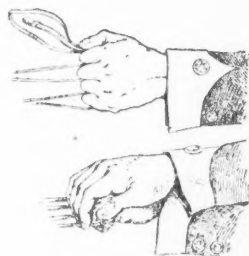
CUT No. 4

know how to apply the elementary rules for the management of the horses.

Mounting. The Russian method of mounting is in three counts or motions. The first is taking the position shown in Cut 3, the second is the actual mounting as shown in Cuts 4 and 5, and the third is the placing of the right foot in the stirrup and the taking up of the reins and lance. The method



CUT No. 5.



CUT No. 6.

is sufficiently indicated by the attached drawings, the only point of special interest being the placing of the right hand on the cantel in the second motion.

The manner of taking up the reins is indicated in Cut 6, the position of the bridle-hand, being nearly horizontal, thumb slightly elevated and wrist flexible.

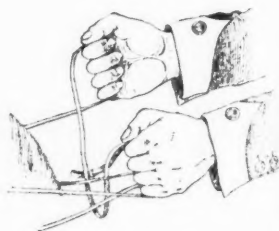
The manner of adjusting the lance in mounting is shown in Cut 7, from this position it is lowered into the lance bucket.

During the preliminary training great use is made of another method of holding the reins called the "Snaffle in both Hands," as indicated in Cut 8.

The dismounting has no special features, it should be noted however, that both in mounting and dismounting, the snaffle reins alone are used; the curb reins hang loosely on the horse's neck. The trooper is required to mount and dismount from the right as well as from the left.



CUT No. 7.



CUT No. 8.

THE SEAT.

While the question of the seat is treated at some length, we find a few special points. For purposes of explanations the body of the rider is divided into three parts as follows: two mobile parts, an upper and a lower, the one from the head to the waist and the other from the knees to the heels; and one

less mobile part, a middle one, from the waist to the knees. The arm is likewise divided into three parts, the upper arm, the fore arm and the hand, the proper use and the position of each is described.

The firmness of the seat is ascribed to two factors, the strength of the contact, called the "Schluss," and the balance or equilibrium; each of these factors is described.

The lower legs hang naturally, the calves touching the side of the horse; the boot is inserted up to the tread in the stirrup, the heel being slightly lower than the toe; the toes are turned slightly out.

Two methods are given for determining the proper length of the stirrup. In one the rider, standing in the stirrups with legs straight and sole and boot horizontal, must have a hand's breath between his buttocks and the saddle. In the other the foot hangs naturally and is not inserted in the stirrup; in this case the tread of the stirrup must be two fingers higher than the top of the boot heel.

MANAGEMENT OF THE HORSE.

Under this heading many pages are devoted to the general rules of equitation corresponding to the new system adopted in 1910, for training young horses which can be found in the "Manual for training Cavalry Horses." The idea being that the young horse is trained for the first year in the remount depot, during the second winter and till spring he is trained by the same system in the regiments; at the end of the second year he is a finished horse and can be ridden by the new conscripts who have the same system of equitation simplified in their drill book. Such a system is, of course, almost ideal, and would make any American cavalrman envious.

While the subject of equitation is too large to be taken up again; it may be remarked that the entire subject is simple and well thought out; while based on the general principles as taught at Saumur and by Fillis, it has been greatly simplified to meet the needs of the trooper. It is recognized that the rider is not a finished horseman and no strain is put on his intelligence.

For this paper it will suffice to say that emphasis is laid on the three means or aids for the management of the horse in the order of their importance; first, the legs and calves, second—the balance or inclination of the body, third—the reins; besides these three principal aids two others are authorized, the spur and the whip.

GAITS.

The Russians use the following gaits: the walk, the trot, the gallop, the field gallop, and the full gallop; and for riding hall work three others are used, the increased trot, the short trot, and the manège gallop.

The walk is from 15 to 18 miles an hour. For the increased trot the horse is sent forward as fast as possible, not allowing him to bear on the bit. For the slow trot the horse must be fully assembled.

The gallop is five and three-fifth minutes to the mile. The manège gallop is seven and one-half minutes to the mile, and at this gait the horse must be kept fully assembled. The field gallop is three and three-fourth minutes to the mile; the horse is extended, the seat deep and the feet home in the stirrups. The full gallop is the utmost speed of the horse and the rider inclines slightly forward.

To move from a halt or to increase the gait the command of execution "March" is given, and for the full gallop a double command—"March-March" is used. To decrease the gait or to halt no command of execution is given, the command for the slower gait being pronounced slowly.

The men are taught to rise to the trot, and to rise on either foot; they are required to alternate the foot so as not to unduly fatigue one leg of the horse. A well trained rider must be able to rise to the trot without stirrups. The rising to the trot is called here the "Easy" seat, and while the men are taught to use this seat yet during the training period habitual use is made of the firm seat.

In change of gaits or in halting emphasis is laid on the necessity for assembling the horse and the use of half halts.

The command "Halt" must be given from 5 to 50 paces from the place the horse is to stop, depending on the gait;

a halt in place is not permitted except from a walk. In executing the halt emphasis is laid on the proper use of the legs, the balance and the reins.

THE RIDING HALL WORK.

The work in the riding hall is described at length and is in reality a continuation of the general system of equitation mentioned above. It is divided into sections and covers the following subjects:

1. Work on a straight line.
2. Turns while moving and wheels.
3. Change of direction.
4. Volts.
5. Abouts.
6. Turning on haunches.
7. Backing.
8. Two track work.

With this work the first chapter ends, and as can be seen this, the first portion of the new drill, is largely devoted to handling the horse.

CHAPTER II.—WORK BY SQUADS.

Under the Russian system a squad is a unit for training purposes, and as it is very difficult to carefully observe more than 15 men, the squads are, if possible, limited to this size. Special importance is laid on the fact that this riding by squads leads to but a passive execution of the command on the head number; and that for this reason the leader must constantly change; the men ride as much as possible separately and each one is individually watched and instructed. Part of the troopers must ride in another direction and at different gaits from the rest of the squad; all possible means are used to make each man a bold independent rider.

While the position of "stand to horse" is as indicated in cut 1, yet the alignment is executed much differently from ours. On the command "dress" each trooper steps in

front of and facing his horse's head, takes the right snaffle rein in his left hand, and the left snaffle rein in his right hand, both seven inches from the bit, keeps the horses' head in the proper position and so aligns him. At the command "front" the trooper resumes his place.

The system of counting before mounting for this squad work is also different. The command is "By Twos,"—"Count," at the preliminary command the right flank man turns his head to the left; all the other turn their heads to the right; at the second command "Count" the right man sounds off "One" and turns his head to the front, the second man turns his head to the left and says—Two—and then turns his head to the front, the third man acts in a similar manner counting "One" again, and so on. This turning of the heads and then snapping them toward the next number and then to the front is followed in all Russian counting.

The mounting is similar to ours except on forming ranks each man is required to align himself and the command is different being "Mount"—"Dress"—"Front," the command "Dress" taking the place of our "Form Rank;" similar commands are given for dismounting and are executed on the same lines.

The rest of the work by squads presents no points of special interest.

CHAPTER III.—JUMPING.

A separate chapter is devoted to jumping which differs in no essential from our work at Fort Riley. Special importance is laid on the firmness of the seat, the "Schluss," the use of the legs and, if necessary, the spurs. The body is held erect, the feet are home in the stirrups, the hands are held low and somewhat forward. The gallop is the gait used and the one noticeable feature of all the Russian work over jumps in the hall is that when taking the high jumps the horses are brought up well in hand and at a collected gait; rushing at the jumps is never allowed. This manner of training to always take the jumps at a collected gait proved the undoing of the Russian officers at the Olympic Games at Stockholm last summer, for when a good hunting

gait was prescribed as one of the conditions they were unable to meet the requirements. It may be of interest to learn that the position of the Russian officers in taking the jumps is one which we might call the jockey seat, the body well bent forward. The following drawings are samples of the type of the usual jumps; they are used either singly or in combination one with another.

CHAPTER IV.—RIDING IN THE OPEN.

Riding out of doors is the last stage in the preliminary training, and must be practiced by all men during their subsequent years of service. This riding is carried out by the men separately, each trooper rides his own line and takes the obstacles independently of the others. If the men are in ranks they must move at different intervals and distances. Certain rules for guidance are laid down which are based on common sense and need not be taken up.

SWIMMING WITH THE HORSE.

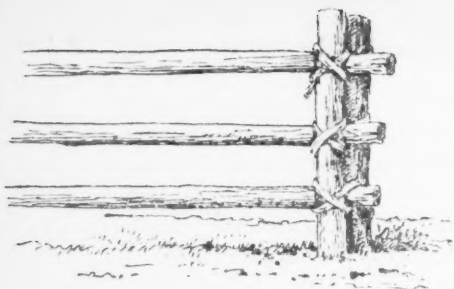
While I have not as yet seen the Russian cavalry swim their horses, the following are the instructions which govern in such a case.

1. To cross a river mounted, the curb bit must be taken off, the stirrups raised on the straps, the rear girth loosened.

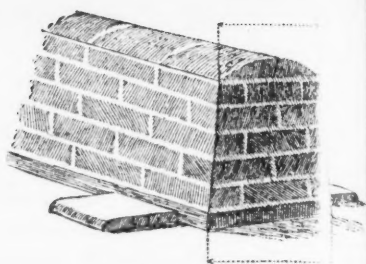
2. To swim the horse across the river, the trooper rides the horse into the water, slackens the reins and grasps a tuft of the mane not more than two hand breaths above the withers.

3. When the horse loses ground, the rider must slip off on the down stream side and swim beside the horse. Should the current flow from the right he holds the mane with the right hand and with the left, if necessary, he guides the horse by the reins. If the current flows from the left, the hands are reversed. As soon as the horse touches ground on the opposite side, the trooper mounts.

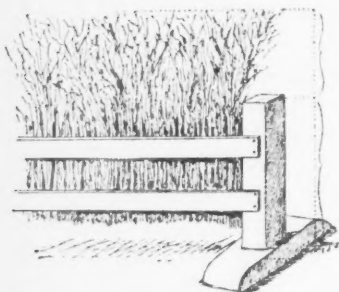
With this chapter ends the first part or section of the new drill book and as can be seen it is devoted entirely to work with the horse. We now come to the second part of the individual training under which is taken up by successive



CUT No. 9.
(Height not given.)



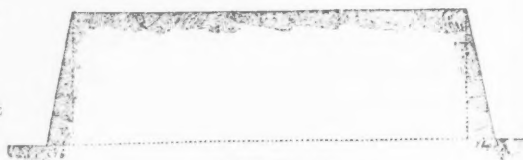
CUT No. 10.
(Twenty-one in. wide at base; fourteen in. wide at top; height not given.)



CUT No. 11.
(Twenty-eight inches high to top of post and forty-two inches to top of brush.)



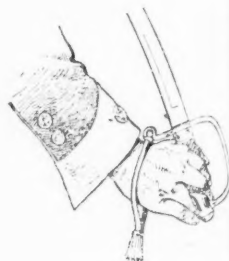
CUT No. 12.
(Seven feet wide and twenty-eight inches deep.)



CUT No. 13.
(Seven feet wide and thirty-five inches high.)



CUT No. 14.



CUT No. 15.



CUT No. 16.



CUT No. 17.

chapters the different manuals of arms. Only so much of these will be described as differ from our way.

MANUAL OF THE SABER.

When mounted the saber hand is placed on the left as shown in Cut 15, the third and little fingers as shown in Cut 14, being free to help the bridle hand. When riding by at the salute, the saber is held as with us.

For officers the salute is executed in two motions, when passing the reviewing officer or at the command—"Gentlemen Officers." In the first motion the saber is raised, the hand at the height of the collar, and is held nearly vertical, but the point somewhat to the rear; on passing the officer saluted the sword is lowered, as shown in Cut No. 16, and this is the second motion.

MANUAL OF THE LANCE.

While we affect to regard the lance as not worthy of serious consideration and to give it no place in our cavalry, yet, in view of the fact that the largest cavalry in the world has now adopted the lance, and that the entire German cavalry, and fifty per cent. of the French is so armed, the manner of handling the same by the Russian trooper may at least be of some interest.

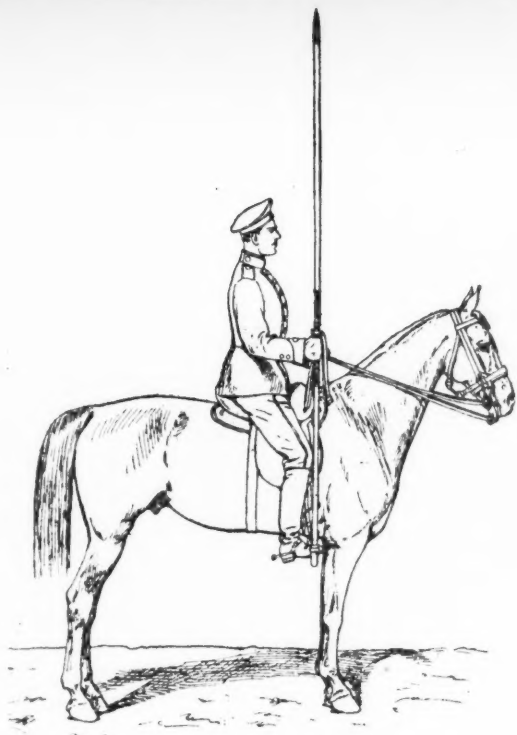
No description of the manual is given as the drawings indicate the same perfectly well. Lance to Shoulder—Cut 17.

Lance in Hand—Cut 18, Lance behind Shoulder, Cuts 19 and 20.

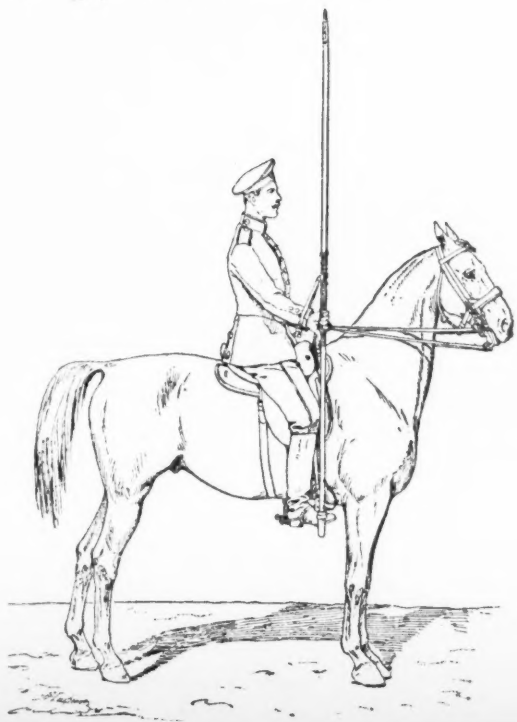
This method of carrying the lance is the usual one in campaign. The loop at the blunt end of the lance is for putting it on the foot when marching. In dismounted action the men to fight on foot pass their lances to the horse holder who places his right foot through the loops, passes his right arm through the knots and throws all the lances behind his shoulder.

Lances on the Hip, Cut 21.

The lances are held in this manner when approaching the enemy.



CUT No. 18.



CUT No. 19.



CUT No. 20.

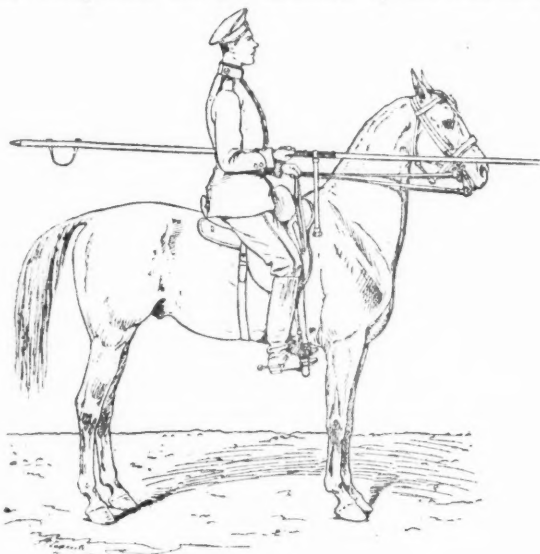


CUT No. 21.

Lances in Battle Order, Cut 22. This position is used for the charge and the hand grasps the lance as shown in Cut 23.

MANUAL OF THE CARBINE, TRUMPET, PRAYER, ETC.

The manual of the carbine mounted is very simple, it is simply taken off or put on the shoulder, no commands are specified, for it is seldom used mounted. The carbine is carried hung from the left shoulder by the rifle strap and



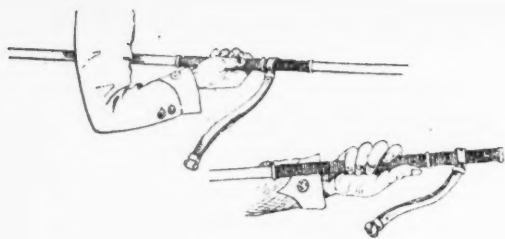
CUT No. 22.

no carrier is used, its position, when mounted, is indicated in the Cut 36 (see below).

The trumpet preparatory to use and when passing at the salute is carried as shown in Cut 24.

The great use of religious ceremonies in the Russian service necessitates a corresponding command as follows: "To Prayer," "Caps (Helmets or Shakos) Off;" which is executed as shown in Cut 25.

The next section of the new drill book is devoted to gymnastics, and under this head nothing of special interest is found till we come to the subject of vaulting.



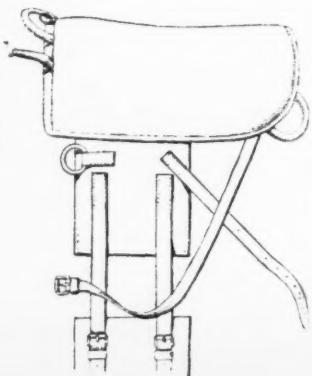
CUT No. 23.



CUT No. 24.



CUT No. 25.



CUT No. 26.

VAULTING.

The principal gymnastic training of the Russian trooper is devoted to vaulting and for this purpose the work is divided into two classes: the first, the exercises on the wooden horse; the second on the live horse.

For both classes of work a special saddle is used which is worthy of notice. Each squadron (troop) has two of these saddles. The saddle itself is shown in cut 26, and its manner of use on the wooden horse in Cut 27.

For work on the live horse, he is led out with a bridle with four set reins and two hand reins and saddled with the vaulting saddle. The four set reins are attached to the saddle in the manner shown in the next drawing and serve to hold the horse's head in a correct set.

The position of the trooper in vaulting on the horse is shown in Cut 29, and the position of his hands in this and Cut 30.

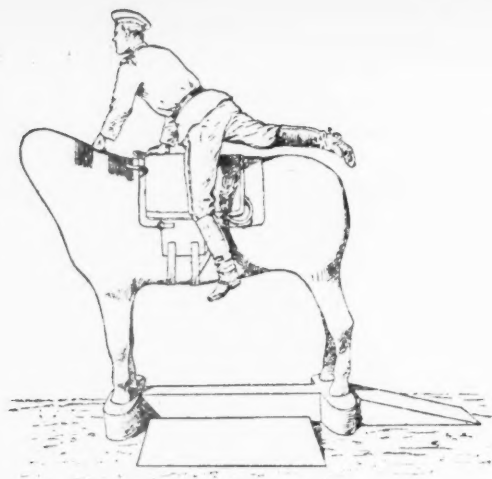
The later training is with the regulation saddle and the final work is had fully equipped as shown in the annexed Cuts 31 to 34, inclusive. The regular cavalry either of the guard or line do not however go in much for this last sort of work. The Cossack work of this nature is interesting to watch and some of them do it very well, probably because they have done these exercises since boyhood and further because their saddle is particularly well adapted to fancy stunts and their horses are smaller.

With these three sections that portion of the individual training which has to do with the horse is brought to an end, the last section takes up the dismounted work and different appendices; instructions for saddling are to appear as a supplement.

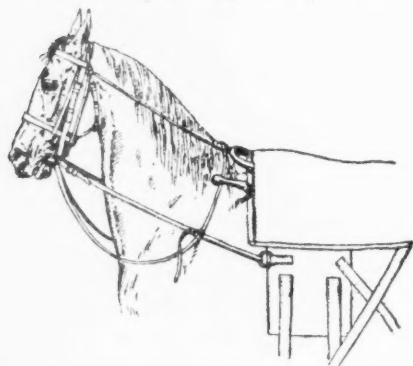
DISMOUNTED WORK.

In the dismounted work we find four things that are of interest as differing from our practice; first, the use of the bayonet; second, the use of a carbine and the lack of all special manual therefor; third, the easy manner of carrying the saber; fourth, the salute.

CUT No. 27.

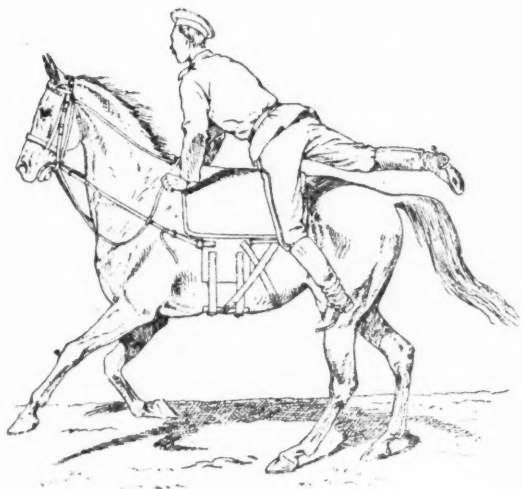


CUT No. 28.

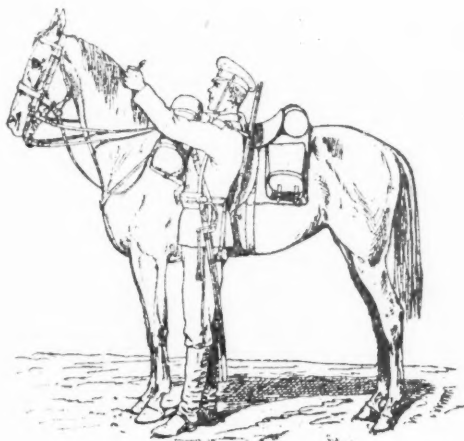


CUT No. 29.





CUT No. 30.



CUT No. 31.



CUT No. 32.



CUT No. 33.

While the bayonet is prescribed for the Russian cavalry and is carried by all except the Cossacks, yet no word regarding its use is to be found in these regulations, and in the time I have been here I have never seen any use made of it, except on sentinel duty. The bayonet is attached to the outer part of the saber scabbard which is carried by the trooper. When dismounting for action on foot, the rifle, the saber, scabbard and bayonet all go with the trooper, a combination not well adapted to quick work on foot. Other than sentinels I have yet to see a dismounted cavalryman use the bayonet. In the infantry on the other hand the bayonet is *always* attached to the rifle.



CUT No. 34.

The Russian cavalry is armed with the same rifle as the infantry, but cut down and lighter, the weight and length of the two being as follows:

<i>Infantry.</i>	<i>Cavalry.</i>
Weight.—8.80 lbs.	8.35 lbs.
Length.—4.23 ft.	3.9375 ft.

The advantage of such a carbine in place of the longer and heavier infantry rifle will be appreciated by all cavalrymen.

A special point of interest is the lack of all manual of arms for the carbine, but two positions are mentioned; the order arms and the position of charge bayonets called "in hand," as shown in Cuts 36 to 38. For executing all movements the rifle is slightly elevated muzzle near the right shoulder. The idea being that the cavalryman is not an infantryman and no attempt is made to drill him as one.

For all formations on foot, for example, mounting the guard, the carbine is carried behind the back swung from the left shoulder by means of the strap as shown in Cut 62, and the saber only is used.

The use of the saber alone for dismounted formations and particularly its use when the cavalry is formed together with the infantry necessitates a more detailed description of the manual than with us. Of this manual note may be taken of the "present arms" of the trooper as shown in Cut 35, this drawing illustrates as well the position of the carbine dismounted.

The most interesting feature in the Russian use of the saber when dismounted is the carrying of the same "at ease" when marching, when on sentry duty, or on other occasions when the saber must be held for some time. Being at the carry saber the saber is taken "at ease" in two motions: in the first the two hands are brought together a little below the waist and the end of the hilt placed in the palm of the left hand, the right hand then grasps the guard near its junction with the blade, the thumb and first finger are above the guard and the other three below it, at the same time the back of the blade is placed in the hollow of the right elbow; in the second motion both hands drop to the side. This manner of holding the saber by the guard instead of the grip, leaves the right hand in a perfectly normal unconstrained position which can be maintained indefinitely.

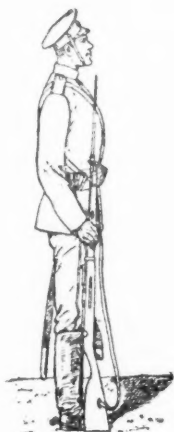
When marching with the saber at ease the men are required to swing both arms freely, for which purpose the back of the blade is held, not on the shoulder, but in the hollow of the right elbow. When passing an officer to be saluted, both hands are held rigidly at the side.



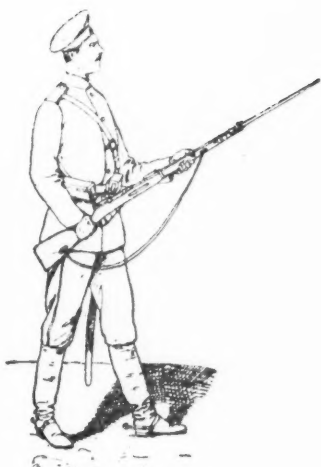
CUT No. 35.



CUT No. 36.



CUT No. 37.



CUT No. 38.

The salute of the Russian soldier is about the smartest in Europe. The first noticeable and the salient feature is the fixing of the officer to be saluted with the eye, for which purpose the head is turned and the chin slightly uplifted while the eyes look straight at the officer and follow him, the head turning, till out of saluting distance. The second feature is the rigidity of the soldier. Uncovered no other salute is given, the hands held rigidly at the side. When covered the head and eyes are turned as before, but the right hand is raised slightly bent, fingers together, above the right ear and the tips of the fingers touch the lower band of the cap behind the right temple until the salute is returned; the right elbow is raised as high as the shoulder. When a general officer is met or an officer of the soldier's own regiment, then the soldier must halt and face toward the officer and remain at the salute as described. The morning salutation of all officers and the greeting of the reviewing officers to their men, and the answering good wishes of all the soldiers shouted in chorus is very impressive.

CONCLUSION.

In the above I have attempted to outline in a general way only what, in the individual training of the Russian trooper, might be of interest to our cavalrymen. There are a few points worthy of special emphasis.

1. The use of one simple system of equitation in training the horse for nearly two years before he is admitted to the ranks, and the use of the same system by all conscripts in their training. An ideal to be dreamed of by us.

2. The rising to the trot on either foot, and the use of three gallops.

3. The use of the lance, a weapon requiring but little training. The sight of a mobile unit such as a Russian Cavalry Regiment, charging with the lance as a cohesive solid unit in double rank would, I am sure, make any American cavalryman quickly change his mind as to the value of this weapon. He could not help realizing that our trooper poorly trained with the saber, in long attenuated single

rank, would stand absolutely no chance mounted, and that all our orders as to the value of mounted action would be but dead letters.

4. The use of a special vaulting saddle both for the wooden and the live horse.

5. The fact that no attempt is made to make the trooper, a cavalryman, into an infantryman with his manual of arms and his marchings.

6. The square look in the eye of the soldier saluting and the smartness of the salute.

In conclusion it is well to think once more of the underlying purpose of this new drill on individual training the development of initiative and independence on the part of each man—or, as underscored in the original Russian text, *“to place the center of gravity of the drill on each individual man.”*

COMMUNICATIONS AND RECONNAISSANCE ON THE BATTLEFIELD.

BY CAPTAIN G. W. MOSES, FIFTEENTH CAVALRY.

INTRODUCTORY REMARKS.

A LITTLE over a year ago the service was startled by the appearance of a little book which for conciseness and efficiency rivals, if it does not surpass, anything of the sort which has ever before appeared in any language. I refer, of course, to the Infantry Drill Regulations.

Officers who have made a study of tactics are enthusiastic in their approval of it and those who have not done so, either from lack of time or from ignorance of the necessity of doing so, have found that at last something more is expected from a regular officer than a mere knowledge of how to drill a company or a platoon on the drill ground. They must learn the correct principles of troop leading and even the handling of the fighting arms of the service in large bodies in order that they may properly play the game which they are expected to play, whether they be called upon to command armies in the field or to lead patrols efficiently.

"The comparatively wide fronts of deployed units increase the difficulties of control. Subordinates must therefore be given great latitude in the execution of their tasks. The success of the whole depends largely upon how well each subordinate coordinates his work with the general plan" (Paragraph 371, I. D. R.)

"Every subordinate must therefore work for the general result. He does all in his power to insure coöperation between the subdivisions under his command. He transmits important information to adjoining units or to superiors in rear and, with the assistance of information received, keeps

himself, and his subordinates duly posted as to the situation." (Paragraph 373, I. D. R.)

The duty of keeping in touch with adjoining units and keeping his immediate superior informed of every bit of information which he may himself obtain is here made the duty of every officer, regardless of rank or the strength of his command, as is also that of keeping his subordinates oriented. Incidentally it both involves the duty of securing information and disseminating this information. Not only must each officer orient his subordinates when he issues orders starting a maneuver but he must keep them oriented and not only must each subordinate make the necessary dispositions for fulfilling his part of the mission of his superior but he must keep that superior and all neighboring officers advised of all information which he may obtain from any source. The means employed for obtaining information in the immediate presence of the enemy is referred to in the Drill Regulation as Combat Reconnaissance, and the manner of disseminating that information is known as Communications.

Battlefield reconnaissance is a separate study in itself for each of the branches of the mobile army, but battlefield communications are maintained by so nearly similar means that the subject can be broadly treated in such a manner as to apply to all. There is no difference in principle between the Information Officer of the cavalry and infantry and the agent of communication of the field artillery.

COMMUNICATION.

"Communication is maintained by means of staff officers messengers, relay systems, connecting files, visual signals, telegraph or telephone.

"The signal corps troops of the division establish lines of information from division to brigade headquarters. The further extension of lines of information by the signal troops is exceptional." (Paragraphs 384-385, I. D. R.)

During a battle each staff officer should have his work prescribed and each will, beyond doubt, be kept reasonably busy in performing that work. All of the other means of communication mentioned above require some originating brain and that brain must be found in one of the staff officers,

except in the matter of orders which will originate with the commander. Since the work to be performed must be proportioned among various staff officers and the important work of maintaining communication cannot be left to chance, it follows that an officer must be detailed at each headquarters whose business it will be to maintain communication with neighboring forces and the next higher headquarters. This will apply to all organizations down to and including the brigade. The method used by this officer for transmitting information will be one of those referred to in the quotation above.

For similar reasons to those just given, subordinate commanders cannot afford to trust this busy staff officer to remember them at all times and to keep them informed of every phase of the action of which they should be advised so they should detail officers to superior headquarters whose duty it is to communicate to their immediate superiors everything which transpires at their headquarters. Such information officers should also be sent to the headquarters of all neighboring troops which are not within the personal observation of the commander. This method should be used down to include regiments, regimental supply officers may be used for this purpose. Similiar means must be adopted by smaller commands when acting more or less independently. As to methods of conveying the information we shall again quote from the Drill Regulations:

"Each regiment employing its own personnel, is responsible for the maintainance of communication from the colonel back to the brigade and forward to the battalions. For this purpose the regiment uses the various means which may be furnished it. The staff and orderlies, regimental and battalion are practiced in the use of these means and in messenger service. Orderlies carrying signal flags.

"Communications between the firing line and the major and colonel are practically limited to the prescribed flag, arm and bugle signals. Other means can only be supplemental. Company musicians carry company flags and are practiced in signalling." (Paragraphs 386 and 387.)

Important messages should be transmitted by more than one means in order that mistakes will be less liable to occur and and in order to insure delivery.

In defensive positions, the installation of a more complete system of field telephones will often be practicable, but there is always danger that the commander, if connected by telephone, will not be able to resist the temptation of depriving his subordinates of all initiative.

Whatever the means of communication resorted to, the method of employing Information Officers as outlined above, is the only one which has as yet been devised which offers any promise of success. Any other method demands more of individuals than can be hoped for under the severe strain of battle. Of course, in some instances, non-commissioned officers of superior intelligence and initiative may be employed to replace some of the officers.

COMBAT RECONNAISSANCE.

The Infantry Drill Regulations emphasize the value of proper combat reconnaissance. "Combat reconnaissance is of vital importance and must not be neglected." (Paragraph 389 I. D. R.)

"It will frequently be impossible to obtain satisfactory information after the action has begun." (Paragraph 394 I. D. R.)

"Before an attack a reconnaissance must be made to determine the enemy's position, the location of the flanks, the character of the terrain, etc., in order to prevent premature deployment and the resulting fatigue and loss of time." (I. D. R. 393.) "Reconnaissance continues throughout the action." (I. D. R. 396.)

Battlefield reconnaissance is usually begun by the cavalry. The reconnaissance of cavalry has passed from the realm of distant reconnaissance into that of nearby reconnaissance. The army cavalry gradually concentrates toward a flank of the army and the reconnaissance against the enemy's front is either taken over by the divisional cavalry or by special cavalry detailed for the purpose. All of this cavalry should be placed under one leader in order to prevent frittering away of the strength of the cavalry by an excess of patrolling in any one locality or an entire neglect of other localities. This leader must seek, above

all things, an idea of the grouping of the hostile forces and with that purpose in view he must send forward patrols varying in force from two selected scouts to entire troops with specific orders as to the sector in which they are expected to operate and when practicable, the length of time they are to stay out and when and how they are to be relieved. In some sections where the terrain is favorable and weather conditions suitable this work can be valuably supplemented by aeroplanes. In the meantime, the more valuable work should be in the process of accomplishment by the army cavalry which has withdrawn to the flank. That cavalry, if it has not already done so, must first of all seek to defeat the enemy's cavalry in order to pave the way for the patrols. In my article in the November, 1912, number of the Cavalry Journal, on Cavalry in Maneuvers I touched on the method which I believe should then be pursued. The cavalry on the flank should never be contented with a position in rear of the flank but should endeavor to echelon itself to the front in order that it may prevent the enemy from obtaining an insight into the movements of the reserves of its friendly infantry and, at the same time, be in the best position for observing the enemy's dispositions and either joining in the battle, operating against the enemy's flanks and rear, beginning the pursuit, or covering the retreat.

On the battlefield itself, patrol service is a matter for the infantry and can be carried out by no other troops, except such as can and should be carried on toward the flanks and rear of the enemy. In order that the cavalry commander inform himself as to the arrival of an opportunity for the cavalry to take part in the fight, officers should be stationed, if practicable, in secure, commanding positions from which they can observe the progress of the action by means of high power field glasses. Bernhardt says: "observation carried out by patrols from the front during the battle of the measures taken by the enemy is unpractical and only possible in peace, and is a procedure that is the outcome of requirements of leaders lacking in determination, who wish to be continually informed down to the smallest details about the enemy, instead of trusting with self confidence to the

compelling force of their own measures" (Cavalry in War and Peace, Bridge's translation, page 72.)

The cavalry on the side of the defensive should be even more energetic in its endeavors to get well out in advance of the flanks of its own infantry, for the initiative rests with the offense and the cavalry of the defense must discover the movements of the enemy's reserves in time to permit of counter measures being promptly adopted by the army commander.

ARTILLERY.

The artillery depends largely upon the other arms for the location of the enemy and information concerning its strength and movements. It is, however, necessary for the artillery to supplement this work of the other arms by specially appointed reconnaissance officers and trained artillery scouts. It requires special technical knowledge of the capabilities and requirements of artillery in order that the guns may be promptly posted and that peculiarly favorable targets may be selected. Much time may also be saved by an artillery reconnaissance officer if he examines the terrain, locates the enemy and, after selecting a suitable position for the guns, prepares firing data so that the guns will be able to begin firing as soon as unlimbered and in position.

The artillery commander himself should accompany the commander of the troops, secure from him the general tactical situation, and decide upon the employment of the guns so that they will best carry out the general scheme. The further details of securing information and watching for changes in the positions of our own troops and those of the enemy should be left to the reconnaissance officers and scouts. Any one, who has ever seen troops in action or at maneuvers, knows the difficulty of distinguishing friend from foe even at the shorter ranges and will be able to appreciate the absolute necessity of the most active battlefield reconnaissance to the artillery. The artillery reconnaissance officers and scouts must accompany the most advanced troops and keep the commander constantly advised of all changes in the dispositions of friendly troops as well as the enemy

and this in addition to the work of the Information Officers or Agents of Communication which have already been referred to.

Reconnaissance officers usually have charge of the sector assigned to their immediate commanders while the scouts are sometimes assigned that duty but more frequently are given some more specific mission which is intended to supplement the work of the reconnaissance officers. Paragraphs 703, 704 and 705, Artillery Drill Regulations specifically prescribe the duties of reconnaissance which should fall to the (a) Artillery Commander, (b) Battalion Commander, (c) Battery Commander, (d) Reconnaissance Officer. It is so carefully and completely summarized that no explanation is necessary, while the duties are so comprehensive as to make it inadvisable to increase the volume of this article by quoting from a book which is accessible to all.

Recent experiments at Fort Riley indicate that the aeroplane has become an exceedingly important auxiliary to the artillery for battlefield reconnaissance. Just how much will be accomplished by them in actual warfare against an active and resourceful enemy is unknown to the writer. Perhaps when we obtain more detailed accounts of their use in Turkey some light may be shed on this important experiment. Several articles have appeared in the daily press but they have either been so meager as to be unsatisfactory or so manifestly the result of a reporter's imagination as to be untrustworthy.

The captive balloon will continue to be used at times, perhaps more as an observation station when no other means is available than as a general means of reconnaissance. Its appearance always attracts the attention of the enemy and we must be careful that the information so conveyed is valueless to the enemy.

INFANTRY ON THE OFFENSIVE.

Upon nearing the battlefield, the general position of the enemy having been previously reported by the cavalry, dirigibles, or areoplanes, the commander should seek a commanding position from which he can obtain the best

possible view and make a personal reconnaissance of the ground over which he will probably maneuver.

He will, if he has not already done so from the map, then direct the subordinates into their respective preparatory positions and give them instructions as to what information he may consider of special importance which he desires them to secure and transmit to him.

You will please pardon me if I emphasize the statement that his personal reconnaissance in the case of larger commands will seldom extend to the enemy's lines. It is very difficult nowadays for the commander of a large force to get far enough to the front to observe the enemy without losing control of his reserve. He must, however, be kept fully informed as to the movements of the enemy and, he should personally observe as many of them as possible for subordinate commanders are liable to overemphasize the importance of occurrences which are transpiring in their immediate front. For this reason commanders of divisions and smaller units should make it an invariable rule to get where they can personally observe the enemy whenever the ground permits. Commanders of the larger units have more time for reflection and can weigh the information received from the front more carefully and conduct the fight more successfully from information so received.

Having given directions for the movements of the subdivisions to their various preparatory positions the commander should issue any orders which he may consider necessary for the protection of his flanks and send patrols to commanding points in the immediate vicinity with orders to remain in observation of a certain sector or to observe the enemy in a certain locality. Many of these flank and observation patrols will remain in position during the battle. Special men should be told off whose duty it is to watch the more important patrols for signals as messenger service is apt to be so slow as to prove valueless. Trained topographers should be caused to reconnoiter the terrain over which an advance is probable and submit sketches.

Each subordinate commander must charge himself with the duty of patrolling his immediate front and watching

his flanks either for protection from the enemy or for the purpose of retaining contact with supporting troops. Under all conditions these flank patrols must continue their observations throughout the action.

If at any time, any part of the front appears to be free from the enemy, patrols must be pushed out into that sector, whose mission it will be to determine the extent of the gap both laterally and in depth.

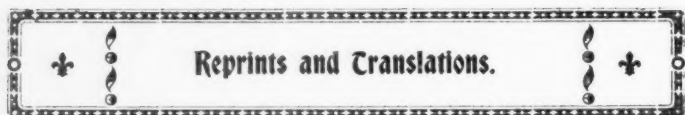
As to the size of these reconnoitering parties, nothing can be laid down. "Reconnaissances in force are dangerous and should only be resorted to when ordered by the superior commander." There can, however, be no doubt that they are sometimes necessary, and they will be resorted to frequently in the future as they have been in the past. The general rule concerning detachments, "Never send out any which are not required and never make them any stronger than the situation demands" applies to battlefield reconnaissance parties with perhaps more emphasis than to any other detachments, for it is certainly desirable to have every available rifle ready for use on the firing line.

INFANTRY ON THE DEFENSIVE.

The outpost line will remain in position as long as it can do so without compromising the action. From this line vigorous patrolling should be resorted to in all directions for the purpose of making an early report on any hostile advance in force and of preventing effective patrolling on the part of the enemy. Well concealed observation patrols may be left out for the purpose of obtaining valuable information of the enemy's dispositions and intentions, depending upon their superior knowledge of the country to successfully return with the information.

In conclusion I wish to say that I know my treatment of this important subject has been but superficial. I have merely scratched the ground here and there but if it will attract the attention of any of the younger officers to the fertility of the ground which is available in the province of troop leading in general and in battlefield reconnaissance in particular my object will have been accomplished. I

commend especially to your attention that splendid book of Von Kiesling which has been translated by Spaulding under the name of Battle Orders. No subaltern without practical experience is competent to lead his platoon into action until he has made a careful study of that or some similar work. No amount of enthusiasm, patriotism, bravery or even common sense can quite serve as a substitute for a technical knowledge of the principles of troop leading.



OUR CAVALRY.

(Reprinted from the United Service for July, 1879.)

BY MAJOR GENERAL P. ST. GEORGE COOK, U. S. A.

OUR cavalry is in danger. It has enemies of its own household (of its saber): enemies among its "familiar friends," some of whom need well to look to it that their own famous weapon be not turned into a shovel. It looks *up* in vain for an intelligent friend. Some would throw away the saber; some would give them long rifles; one would equip them as brigands, pure and simple, with rifle, pistol, and a bowie-knife. It has savage enemies, mounted and armed with fire-arms and with the lance, which, with its better rival, the saber, has in all ages crested the waves of victories, and holds a place among civilized and savage to this day. But the Indian thus equipped rarely faces the "long knives," but retreats to the natural fortifications of his land—lava-beds, etc., so strong and near—and there, with the best fire-arms of long range, defies our best infantry. *There* the saber is of little use, the horse of none. But the Indians are at desperate bay, as in a big "drive;" they are surrounded now, and see and feel the daily contraction of the ruthless bounds and their approaching fate.

Thus the saber is temporarily greatly depreciated, and, by a curious coincidence, the cavalry has been burdened by tactics, the fatal defects of which are overlooked in this exceptional Indian warfare, but which would, eventually deprive us not only of the saber, but of this great force deemed essential in all modern armies.

The value of the saber has never been fully tested in our service. One cause has been that it was nearly always supplemented by the carbine, and the choice in use of the two weapons has been with the latter—for it offered ever a tempting excuse, a passive choice against the energy of violent action and the shock of the charge.

The other cause was that the saber was seldom sharpened or kept sharp. As issued to the new troops, it is little better than a club.

An English officer, after his first combat in India, observed with astonishment among the slain by some allied native cavalry, many heads and limbs dissevered, and evidently by single strokes. He inquired into the secret of such execution, expecting to find sabers of fabulous excellence. But it was all done with condemned British sabers; the natives had sharpened them like razors, and to preserve the edge had changed the metallic for leather scabbards; they had also attached longer wooden handles.

It is said that the cases are rare of the actual crossing of sabers or of bayonets. But *the* argument, from sedentary sources, is that the medical records show few wounds inflicted by those weapons. Of all the wounds of our Civil War that "have been analyzed and recorded," only nine hundred and six have been inflicted by saber cuts and bayonet stabs. But there is no record of the wounds of the slain; and thrusts or points are far more fatal than cuts (although the writer has known one to cleave in twain an Indian's head who had a rifle in hand.)

It should be remembered, too, that cavalry are celebrated for making many prisoners—by the thousands at the battle of Winchester. They dominate disordered infantry; the saber and its point is upon them, and who may flee from a horse!

If, in a charge or *mêlée*, one trooper, saber in hand, meet another with pistol or carbine, the violent motion will, as a rule, cause the latter to miss his opponent whilst about to meet his saber point; but if the shot be effective, in many cases to one it will not disable his adversary for an immediate thrust or cut. A man in a charge who encounters the point of a passive saber will be deeply wounded. "My knife never

snaps," said an old frontiersman. A dragoon expressed a similar idea, "My saber is always loaded."

But in truth the argument is decisive in favor of saber and bayonet. All know that it is not a rare thing to make cavalry and infantry charges—is ever a victory without one. The reason that they are seldom fully encountered is that they are so fearful; one side generally gives way, shrinking from so imposing, so dreaded, an onset.

By the saber and by the bayonet the bravest and best commanded troops gain nearly bloodless successes.

Cavalry never had just appreciation in our country. Its first introduction into our army after the old wars was a single regiment in 1833. Before 1861 it had not acquired the numerical importance to attract interest or to be well known by many officers of the army. A consequence was that at the beginning of the civil war our chief commanding generals were ignorant of its tactics, its management, and its value. They took up prejudices, too, which arose from the length of time ever necessary for its instruction and discipline; disappointed at its premature inefficiency, in the hands, too, of a multitude of inexperienced officers. But, besides, the forests and other natural difficulties of the scenes of several campaigns gave excuse for continued indifference and ignorance. All this was a great damper to an arm requiring a peculiar talent, much experience, and a wise but stimulating appreciation. Added to all, it was trained, by a strange fatality, under two far differing systems of tactics.

The results were, with a few brilliant and suggestive exceptions, notably at Winchester, under a very young but thoroughbred cavalry general—that, exclusive of services, important, indeed, but of which actual fighting was not a prominent element, it became in battles and serious combats little better than a poor substitute for infantry.

The carbine became the arm on which it relied. When used on horseback it was especially inefficient. The cavalry was consequently generally dismounted for action.

This neutralized one-fourth, to hold and guard the horse. Their carbines were inferior to the musket.

They were less mobile than infantry, unless with extraordinary risk of loosing the horses.

The horses were sometimes lost.

They cost as much as the very best cavalry.

* * * * *

There must always remain a cavalry to carry by a destructive momentum cold steel into the hearts of masses, columns, lines, which the dire exigencies of war enable it to strike; to surprise in irregular charges of great velocity smoke-enveloped batteries—a service often of capital importance; to push, to follow up, and give abiding value to victories.

The speed of a line of charging cavalry, the aggregate of life, motion, noise, and power gives a spiritual momentum to both rider and horse. From clouds of dust and smoke, with cannon roar and a great shout, it comes! There is a rumbling thunder of hoof-strokes shaking the ground, and a lightning gleam of steel.

The nerves of many expectants must be shaken. Thus, if it carry home fragments through random volleys, there shall be confusion to shield the line following, and some gaps to let its torrents in.

We shall have such a cavalry, or, for a time, a hybrid force, begot of the new tactics; a sort of mounted infantry, best mounted on mules or ponies; it will be useful for a time against Indians; even in war, for scouting and some rare case of surprisal; but it will not pay; it will be too costly to use as infantry; and when war shall come we shall begin, as in 1833, to build slowly upon tradition, with no written system that can be used.

The writer is convinced that in many exigencies of war improved fire-arms play an important part; that the battle of Rossback would have been such a case. Soubise, with sixty thousand men, seven thousand cavalry in front—marched with a long sweep to reach the flank or rear of Frederick's twenty-two thousand men camped in order of battle. Frederick, who detected the design, marched at the proper time, with four thousand cavalry under Seidlitz in front, and covered by a broad hill, met and surprised his enemy marching,—took him in flank. Seidlitz had time to put himself in order, and then,

without awaiting orders, charged upon the vast column of cavalry, only two or three regiments of which could manage to deploy; he "slashed through them" over and over again, and in not many minutes drove them on their infantry and from the field in hopeless flight. Then the Prussians—only seven battalions engaged, or visible to the enemy, and with twenty-two pieces of artillery—smote the disordered and undeployed column of infantry. But Seidlitz had rallied and got in good order in a hollow; until, observing the proper moment of the enemy's confusion, he charged upon their rear, and in twenty-five minutes drove in utter route the fifty thousand infantry, taking five thousand prisoners, etc., etc. Those that escaped were fifty-five miles from the field of battle the second day.

The writer would arm a portion of our cavalry with carbines, but undoubtedly in such a battle as Rossbach they would prove a mere incumbrance.

The first step towards a permanent cavalry was taken in 1832, when eight companies of mounted rangers were legalized and raised. Their name and character were a concession to a prejudice, better founded then than now, in favor of Western frontier material for Indian fighting.

The following year, 1833, the regiment of dragoons replaced the rangers, and became a permanent army organization.

Its first year was passed under miserable, and indeed calamitous conditions. Allowing for an inexperienced but profound ignorance in the War Department of the new arm, its treatment that year would serve as an extreme illustration of the "little wisdom" of cavalry government.

The folly was tragic; it deserves a monument of warning.

Good stables were built at Jefferson Barracks, Missouri, for the six troops first organized, and they occupied the fine quarters there, in the autumn. They were very busy with the first lessons of a new art, when, before all their horses had been received, without premonition, there came an edict for a march to Fort Gibson, upper Arkansas. Before they were all clothed—and some without instruction—wretchedly armed, they were put upon horses, and started upon a five-hundred mile march in snow. Arrived in the last days of December, they found no

quarters, stables, or forage; this last was not attainable. The mercury sank to 10°.

Emerging from a canebrake in the spring, they were joined in June by the other troops, and all, still without proper arms, marched, with the mercury at 105°, due southwest, with no particular object, unless in the mind (!) of the War Department, to flatter Congress that it could make a fiat cavalry that would circulate.

Whether from seeds of disease implanted by their wretched winter exposure or the terrible heats of the nearly waterless plains (which were persistently invaded, as if in defiance of nature, the only enemy), they lost that summer one-fourth of their number—officers and men—including the hair-brained brevet brigadier-general commanding, and his aide-de-camp.

Of the rise, progress, and decline of our systems of cavalry tactics I shall here give a sketch, with a criticism; if this last prove to be technical and dull, nevertheless it shall closely touch matters of much public interest.

At Fort Gibson there were in the regiment but two copies of some forgotten cavalry tactics. All the troop officers were drilled as privates by the major, who had a book; in afternoons these officers imparted to squads of the rank and file the instruction of the mornings.

The regiment was divided to two other posts, on the Missouri, and upper Mississippi, and in 1836 a second regiment was added to the army for southern service. Six years were passed with little tactical progress. Only the Seminole Indians of Florida were pushed to a war, in which, of all the army, the Second Dragoons alone was a constant factor. In the north there was a long lull of territorial encroachment; a very quiet and friendly supervision of the tribes was maintained by summer marches of the First Dragoons.

Three of its young officers had been sent to a cavalry school in France to observe and practice their system, and to make a translation of their tactics. It was made, and in February, 1841, it had been approved, printed, and published. It had been adopted in France in 1826, and was for that portion of their cavalry which was armed with carbines, pistols, and sabers (or with lances).

It was one of the old European systems, restricted of any elasticity by formal conservatism. Much was sacrificed to a strict consideration of which flank of a force should happen to be in front; an inversion was an exigency which must receive special treatment, or must be avoided by maneuvers dangerous for cavalry, and with no other motive or excuse; such were the countermarch, and the formation of long lines by movements of one, two or four files. Any change of face or formation, during which cavalry cannot make an attack, makes it helpless for so long; and its chief enemy, other cavalry, is watchful, prompt, and of great velocity of motion.

In that system the "open column" of platoons was used for regimental evolutions; their column of fours was, in consequence of double ranks impracticable, and its depth was double the front in line.

It was the result of the old theories and formation, that in the tactics of 1841 were to be found such puzzling commands as, "On the rear of column—by inversion—into line faced to the rear."

Right or left in front then made a great difference of action and result; and a mistake of one troop, perhaps under fire, would produce general confusion.

In December of 1858 the colonel of the Second Dragoons was ordered by General Scott to revise this French system. At the beginning he was not opposed to cavalry formation in two ranks. After a time he became convinced that the single rank—called in the British Army, "rank entire"—was far preferable. He burnt what he had written, and began again.

This formation has now reached so strong a footing that it is scarcely necessary to discuss it; as, however, the double rank formation is still to be found in the tactics now prescribed, it may be well to touch briefly on some facts and arguments which condemn it.

It was found that single rank cleared the way in troop instruction of all the most difficult and puzzling movements, which probably doubled the time with beginners; that it could greatly simplify all maneuvers, even of brigade. Much seems to result from the fact that four troopers abreast practically cover a square of ground, and thus a column of fours

becomes an "open column," has the depth of its front in line. It could be used in all evolutions, and, in connection with another logical improvement or two, would dispense with the most difficult and complex ones. It was considered, too, that these facts had greatly increased significance in view of the economical national policy of a very small standing army, and the consequent necessity of creating cavalry for war in a minimum of time. It used to be considered impossible to create good cavalry in time of a war of moderate duration, and, from evident causes, that grows less and less.

But above all he was convinced that the new formation made cavalry far more effective in war—in battle, probably, almost doubled each trooper's value.

It adapted itself to the rather modern theory, and practice, that cavalry should be disposed in many lines, and should depend upon striking blows. Colonel Napier, the great military historian, thus sums his observations in the Peninsular War: "That cavalry that had the last reserve was victorious."

It was a change called for in view of improvements in artillery and small arms.

The Duke of Wellington favored the change, decidedly; he thought it would "render the use of cavalry much more general than it is at present." (1833.)

The single rank was proved very effective by the British Legion, in Spain (under Sir Hugh Evans; and in Portugal, 1833-34, under General Bacon).

Colonel Macdougall, superintendent of the British Royal Military College, in his "Theory of War," (1858), concludes by strongly recommending for "both light and heavy cavalry:

"The abolition of two ranks.

"The substitution of a good revolver pistol for the heavy, cumbrous, and useless carbine."

But a great obstacle was found to the success of the new system in the legal cavalry organization of ten troops. The Duke of Wellington considered this a matter of so much importance that he recommended the change of tactics in England to be suspended, to await action of Parliament for a suitable organization.

The colonel, however, persevered, and with limited experience then, elaborated a new system, embracing evolutions for brigade and division (the tactics of 1841 stopped with the regiment.) He worked very quietly and unquestioned in Washington for eighteen months, with an interval of the summer of 1859, when he went to Italy to witness a campaign in the war of Sardinia and France against Austria.

In the spring of 1860 the Secretary of War deputed a distinguished officer to examine and report upon his work. He and the author together went over every word of it with careful scrutiny, making very few and slight changes; the report was favorable.

The following is extracted from its "Introduction": "Adopting, then, the single rank formation, my work of revision became one of construction; and I have chosen what I judged to be the best points in the systems of France, Russia, Austria and England. I have added to all. The work will be found to amplify the old range of movements, whilst its simplicity renders it less voluminous.

"In the decisive action of cavalry the rear rank, under another name, will be screened from much of the enemy's force; will be reserved from the confusion which even successes throws into the front rank; but that rank defeated, it not only escapes being involved, but is close at hand to profit by the impression which may have been made on the enemy."

But the author did not find favor with Secretary Floyd; he delayed final action, and assigned him to a distant command.

He was only able to return from this in October, 1861, and then he found the new work had been approved by the new administration, and it was printed and published with all form and sanction of the War Department.

The characteristics and improvements on the old European system were chiefly the following:

1. Single rank formation.
2. A very slight recognition of "inversions."
3. An habitual use of columns of fours.
4. A double facility of oblique deployments.
5. Marches in line of troop columns of fours.
6. Dropping the use of the carbine.

The author, promoted, and placed in command of the cavalry of the Army of the Potomac, a few days after received a letter from the very powerful young general commanding that army, forbidding the change of tactics as dangerous "in the presence of the enemy;" and soon after he armed the cavalry with carbines. And be it noted, that commanding a division, the new system, embracing instruction for its movements, thus gave place to that of 1841, which contained no tactics even for the brigade.

But the newly adopted system had better fortune elsewhere in spite of the increased difficulty of adaptation to the twelve troop organization of volunteer cavalry. A lieutenant colonel commanding a regiment of volunteers, wrote to the author: "In two months of bad weather in a Kentucky rainy winter, we were able to execute every evolution in your tactics at a gallop." The tactics of 1841 prescribed that the trooper "after one hundred and eighty lessons or days of instruction should be able to enter the school of the squadron."

Afterwards, from stupidity or design, when books of cavalry tactics were called for, both systems were sent out indiscriminately from the store-room at Washington, where they were deposited. Then Mr. Stanton gave a *verbal* order to discontinue the printing and issuing of the new adopted system.

But as late as 1872 the War Department furnished the Third Cavalry with the new work at the urgent request of its colonel, approved by the lieutenant general, and the regiment was instructed accordingly.

After the war, General Upton wrote a new infantry tactics, founded on the innovations of the cavalry system of 1861. Especially he adopted the use of fours, the chief similarity of the proper movements of the two arms, and only rendered possible by single rank in cavalry.

The Board of General Officers, which approved Upton's tactics, struck with the great improvements originating in the cavalry tactics of 1861, but probably ignorant of that fact, as of cavalry tactics generally, recommended the assimilation of the tactics of cavalry and artillery to Upton's for infantry.

Thence arose an unreasoning cry for assimilation, which has been carried as a new fashion, to extremes.

In 1867 the writer, considering the possibilities of the new organization of the cavalry regiment changed to twelve troops, resolved to employ all his leisure in re-writing the system of 1861.

This large organization suggested the idea, which he thinks turned out happily, of forming the regiment habitually in two lines, and treating it in some degree as a brigade; and this was much favored by an extra number of field officers.

(The national legislature may well bear in mind that a change of organization is no light thing; that it may render impracticable any existing system of tactics.)

The writer had then gained the advantage of experience on a large scale, and not writing under orders, felt relieved of the restraints of precedent and conservatism. Guided always by practical knowledge, he resolved to follow the suggestions of a deeper study to their logical and ultimate results.

To illustrate, he will explain the origin of the regiment and brigade double column of fours, perhaps the most important invention, which will enable him to credit with a share in it an old friend long on his staff, John Buford, a man of cavalry instincts. General B. was obeying, in the Army of the Potomac, the system of 1841, but having in mind the double column of platoons in that of 1861, marched regiments side by side, each in column of fours; he told the writer that the roads were wide enough (although too narrow for platoons), and that he found this formation in marches gave him great advantages, great facility and rapidity to sudden deployments.

The writer found that this double column of fours had the happiest adaptation to single rank; and an especial one to the regimental formation in two lines.

In the new work, which shall be conveniently referred to as the MS., simple provision is made to allow all mention or thought of right or left in front, or of inversions to be discarded; and, of course, there are no formations of lines by increments less than a troop, or marching from one flank past the other.

There is instruction as to the application of movements—a thorough system of mounted revolver target practice, the result of a winter's practice in a mountain valley of Utah—an especial

study and instruction as to the methods and circumstances of all charges, and of rallying.

In July, 1868, a board of three cavalry colonels was ordered to revise or examine and report a cavalry system of tactics, "conformed as near as possible to the infantry system."

Several manuscripts were submitted, but the MS. of the writer was thoroughly studied. One member hesitated on the single rank; but they were about to adopt it unanimously,* when the Acting Secretary of War, professing the same doubts, defeated a system he had not read, by recommending the board to try to devise a *double* system. The board was dissolved perhaps six months later, and no report was published.

In August, 1869, a mixed board, with the late Acting Secretary of War, president, and only one cavalry member, was assembled to "practically test the systems of tactics heretofore adopted for the artillery, cavalry, and infantry arms of service, to reconcile all differences, to select the best forms of command, and of drum and bugle signals."

The MS. was sent to this board. Near a month after a member wrote to the writer, "I think I may safely say that your system, with few changes, and they perhaps only verbal, will be adopted for mounted troops." In January of the following year he wrote, "The changes have not been made in the matter of the text, but in the arrangement. I have fought against the change, and am sure the original arrangement will finally obtain. I can still say that yours are the *cavalry* tactics that will be adopted, with fewer changes than have been made in Upton's infantry tactics."

*General Emery wrote the author: "I did say to you, and I am quite willing you should make any use of it you choose, 'That if single rank in cavalry was to be adopted, I considered your tactics unique.' You have greatly simplified words of command, etc."

General I. N. Palmer: "I think that your system, after it had been made either a double or single formation, was as near perfect as any we could have."

General S. D. Sturgis: "I consider your revised tactics as incomparably the best, and I would rejoice to see them adopted."

An assistant adjutant-general from the cavalry, and who had himself written on the subject, being recorder of the board, was even more warmly in favor of the MS. than either of the above members.

Thus much may be pardoned to strengthen the faith of the reader in a work which has not yet had the fortune to be printed.

After more than a year the board reported in print.

But in cavalry the new arrangements remained unaltered; and the MS. plan, beginning with what the recruit, or volunteer, must first learn, and everything in orderly sequence, was altered to give first place to sixty-four pages of infantry tactics; and the duties of the "interior service," the care of the horse, arms, camp duties, were relegated to an appendix.

The board *did* substantially adopt the MS. (without a word of credit); all its novelties—single rank (presumably the ex-acting Secretary *now* approved it), regimental formation and evolutions in two lines, double columns of fours most used in regiment and brigade—no *word* of right or left in front—the formation by *troop* of all lines from columns of fours—columns and double columns of attack; these changed in name to "divisions" and "double column of divisions" (to "reconcile" the powers.)

By some fatality the board spoiled some and added a few evolutions, so that the writer wrote an official criticism, and proved, by diagrams, that six regimental and two brigade evolutions involved impossibilities. This was referred to the inspector general and an assistant, who reported the objections to be substantial. As the system was not published, the inference seemed irresistible to the innocent critic that it was disapproved. But no such thing; it will appear that it was approved a year or two after.

But the infantry system reported was less fortunate. It appears that about a year after, all the reports of the Schofield board were sent to Lieutenant-Colonel Upton, and he was informed that the "Secretary approved his system of infantry tactics substantially; . . . and the systems reported by the board for the artillery and cavalry are also by him approved, only modified so that all three may be in perfect harmony each with the other . . . The responsibility will rest on you and when you approach completion, please advise me fully of the state of the work, and I will endeavor to procure the order of the Secretary for its publication."

It is always difficult to express an awkward idea, or the idea of another plainly, or even in the best English (and this was again verified in the order adopting Upton's works.) Let

it be considered: a board of five officers selected from the generals and from the three arms had so far changed the infantry tactics that its report, if adopted, would put an end to an old copyright; but is sent without approval or disapproval, to the author of the old work, to be used for improving it by revision; and the tactics for cavalry and artillery, the former approved, or substantially adopted by a cavalry board, and that mixed board and even by the Secretary, are submitted to an infantry officer to be made over to fit his old infantry system, and not even to be read before an order was to be procured "for its publication."

July 17, 1873, an order of approval was issued for "The revision of Upton's infantry tactics, by the author, and the tactics for artillery and cavalry (including the proceedings of the board, Major-General Schofield, president), assimilated to the tactics for infantry."

It would certainly weary past endurance any but professional readers to attempt to specify all the faults to this Upton cavalry tactics now in use. So there is great difficulty to decide where to begin and where to make an end. As a cavalry commander who had tried to teach it, and also to use it against Indians, writes that this experience of it "has increased my contempt for it to a degree that leaves me with no patience to criticise it. How any set of men who pretend to know anything of either the English language, or of the principles of tactics, could be other than ashamed of such crude errors and exhibitions of ignorance as are shown wherever one looks into it, passes my comprehension. . . . The skirmish drill is as bad as possible, and this with us is vital."

The critic must then endeavor to select some salient points and as mere specimens.

It is well and just to make here a considerable quotation, as it involves several tests of the work, and is one of the few real "harmonies;" (and the writer here makes his acknowledgment for the convenience of numbered paragraphs, especially as the author makes no use of them for the benefit of himself or students.)

"School of the battalion, 783. Being in column of fours, right in front, and at a halt, to form close column of companies to the right, the Major commands:

"1. *To the right, close column of companies.* 2. MARCH.

"(Pl. 8.) At the first command the captain of the first commands: 1. *Forward.* 2. Column right; the other captains command: *Forward.*

"At the command *march*, the first company changes direction to the right; the captain, after advancing thirty yards in the new direction, halts and allows his company to march past him; and when his rear four approaches him, he commands: 1. *Fours left.* 2. MARCH. 3. *Company.* 4. HALT. 5. *Left.* 6. DRESS. 7. FRONT. The other companies move forward and successively change direction, so as to enter the column in rear of the first, and are formed in line and dressed to the left by the same commands and means as the first.

"784. To form *on the right*, the major commands:

"1. *On the right, close column of companies.* 2. MARCH.

"The first company executes the movement as prescribed for forming to the right; the other companies move forward and successively enter the column beyond the point where the first changed direction, form line to the left, and are dressed to the left as before.

"785. To form *to the left*, the major commands: 1. *To the left, close column of companies.* 2. MARCH.

"The first company changes direction to the left at the command *march*, and having cleared the flank of the column by thirty yards, forms in line to the left, and is dressed to the left. The other companies enter the column in front of the first and are formed in line to the left, and dressed to the left in a similar manner.

"786. To form *on the left*, the major commands: 1. *On the left, close column of companies.* 2. MARCH.

"The rear companies pass beyond and enter the column in rear of the first, each company, as before, being dressed to the left.

* * * * *

"789. The battalion being in column of fours, left in front, the movements *to the left*, *to the right*, and *on the right* are

executed the same as when right in front, except that the companies, after entering the column, form line to the right and are dressed to the right."

Which last means that the new column, which faced in two cases to the front, and in two to the rear, when right was in front, now with *left in front*, does the same, but in each case exactly reversed. (The plates misrepresent the formations showing an *open column*.)

Now, 784 makes exactly the same formation as 783, some part of it in each case on the same ground; but it is more difficult to perform, and is open to the serious criticism of disabling every part formed from any action until the last formation—by a *flank march*—is completed.

It is observed that these commands give no indication as to right or left being in front after the execution, and that changes every time; nor the direction to which the new column shall face, but indicates a wrong one, for in all other like commands, "*on the right*," there results a change of face to the right.

Then comes in 789, which, with *left in front*, reverses all the above formations.

Essential differences in the movements depend upon a right hearing by cavalry in motion, probably in a high wind, the difference of *on* and *to*; making a regiment face or turn its back upon an enemy by no other indication. And these puzzling differences are to avoid inversions.

Now in the formation of this same column (*right or left*), *front into line*, the book ignores which flank may be in front, and in half the cases makes extreme inversions—of fours in troop, and the left company to the right—and all ignored.

Suppose this *done*, and the next change to be a march to the *right*, followed by a necessity for any one of the above movements. Will that column be "right" or "left" in front? Any uncertainties, mistakes, diverse decisions of this question, would lead to confusion or an extreme difference from the result required. What "system" is there in ignoring right and left in front in some maneuvers, and not in others? (It originated in copying the tactics of 1861 only in part.)

This is the preparation of a small "battalion" for regimental exercises; but in the regiment are found, in 957 and 958, only two of the eight movements mentioned or hinted at; no word of right or left in front. Then, how shall the majors decide as to the meaning of the colonel? How shall they use their painful studies and practice of those phenomenal puzzles, which have bewildered and taken up so much of the time of the volunteer battalions? There is no explanation; confusion would result.

With a view to "perfect harmony," and to make the cavalry and infantry "as near alike as possible," this work introduces into company and into regimental exercises the formation of the company in double columns of fours, and also *two* double columns in a troop, which *are not* in the infantry; but not content with useless work, it disposes the regiment into lines of these columns, and with *closed intervals*. Such formations can only be intended for the field of battle; but to give effective force to cavalry, the closed intervals make necessary to a deployment preliminary and dangerous long flank marches.

Contrast the vagueness and even misleading nature of the commands in paragraphs 783-9 with one in the next paragraph, 790: to reform in column of fours, the major commands: 1. *Column of fours.* 2. *First company.* 3. *Right forward.* 4. *Fours right.* 5. MARCH. If he should command, 1. *Column of fours, right forward.* 2. MARCH, he would escape exhaustion of his voice and the futile transfer of the instruction of his "first captain" from the recitation room to the noisy and troubled field of action.

In paragraph 717, the battalion in line, the major commands: 1. *Fours right-about.* 2. MARCH. 3. *Guide right*; and the line is supposed instinctively, to march to the rear. Now, in 718, he commands to a motionless line. 1. *Continue the march.* 2. *Platoons right-about.* 3. MARCH. 4. *Forward.* 5. MARCH. 6. *Guide center.*

These commands contrast as if they belonged to different systems, and one is short to uncertainty, the other prolix to repetition. But as to "perfect harmony," the last movement is not found in the MS., nor in Schofield proceedings, nor in the infantry tactics; exactly the same can be said of "by right of

platoons rear into column" (507), which in addition is *impracticable* (pardonable ignorance for an infantry author?) But in this last, "dressing" of platoons is introduced—"to be as near alike as possible"—"in harmony" with the staid and methodical slowness of infantry, but never heard or read of before by any cavalry officer. And the platoon itself, which first and last enormously swells the amount to be learned by volunteers, is *useless*, is not found in the MS., nor in the Schofield board proceedings (only in the old 1841 tactics, where the column of fours of a different nature could be little used, and where the squadron consisted of two troops); and which has mention but in a single paragraph of the infantry battalion as a possibility.

Cavalry is made "near alike" in two evolutions, which, however, they may possibly suit the infantry, are as dangerous to cavalry, useless, and absurd. The first is the breaking a regiment of eight hundred or a thousand yards front, to march by fours from one flank close in front of the other; the object could be attained in ten seconds by "Fours, right or left, march."

The other, 905, "on right into line" for the formation of a line of equal extent by fours. Should a regiment of cavalry or *infantry* attempt this formation—and there is no other way laid down—on arriving in an opening, to oppose cavalry, a single enemy's troop could easily sweep away all the first fours—facing in two directions—and most likely the whole regiment in flank march behind them.

The author assimilates infantry to cavalry, by forming a "double column" of infantry, pages 221–24, in the same manner of Schofield proceedings (following the column of attack of the MS.); this, notwithstanding he has the same formation, made in a different manner, under the name of "column of divisions".

If any one decidedly worst feature and vital fault of Upton's cavalry tactics could be selected, it would probably be its omission of this formation,—and the "double column of divisions,"—properly of "attack," this name truly indicating their essential character; this palpable result of ignorance is enough for any cavalry mind to condemn the work. As to assimilation, "harmony," it is simply its opposite; it steals a cavalry jewel, leaving it poor indeed!

The marches and evolutions of double columns of fours, for regiment and brigade—perhaps the happiest of late improvements—are harmonized out of the Schofield board's proceedings.

The work omits orders of battle, formations for and methods of attack, which is the sum of all cavalry action,—the passage of lines, collections or summaries of general rules and of definitions; rallies—merely alluded to; pistol target practice, save five lines; picketing of horses in camp (campaign). The writer, after twenty years' study and experiment of this last, and observations in an European campaign, gave the concise result in the MS., and it was copied in the Schofield board proceedings.

No exercise for brigade, or only seven pages (there are seventy-two for the infantry); it takes up the brigades in a column of fours, say three thousand yards deep, and keeps that as the basis of supposed evolutions, without any commands, through five of the pages; one evolution is the formation by fours of a single line about a mile and a half long, which, at a walk, would consume half an hour. No sane cavalry commander ever conceived in idea such a monstrosity.

The importance which this new tactics attaches to the different subjects of instruction must be pretty well indicated by the space severally allotted, thus:

To dismounted instruction is allotted.....	132 pages.
About platoons, and company double columns of fours (useless).....	64 pages.
The charge, in battalion.....	1 page.
The regimental charge.....	2 lines.
Pistol target practice.....	5 lines.
Evolutions of brigade.....	7 pages.
Ceremonies.....	48 pages.
Seventy-five cavalry trumpet signals, with music.....	30 pages.

With the confusion of seventy-five musical signals, the average soldier would not learn above a dozen in a year.

Colonel Upton was instructed to make the infantry "school of the soldier" identically the same for the three arms. (!) Unable quite to do this, he has, *en revanche*, given the cavalry

the task of the "school of the company" with some formations *added*; this, and a division into four, instead of two platoons, in despite of harmony even for troopers afoot.

Then follows the "battalion dismounted" in vague and careless shape; but not failing to include "columns in mass," echelons, single and double rank. (!)

After the instruction of the cavalryman in the company and battalion drills in two ranks, we find that the regiment, dismounted to "fight on foot," forms in single rank. Contrary to precedent and convenience, shirmishing is first taught on horseback.

What dismounted movements were ever made in the war by the cavalry other than the advancing, retiring, and the flank marches of lines? (They *were* very apt at charging.)

Shall cavalry volunteers in time of war be set to acquire the exactitude of drill—the peculiar formations of infantry essential to *their* part—a sturdy resistance of all sorts of attack?

Let the first one hundred and thirty-two pages of this tactics for cavalry answer! Then follows for these recruits the tedious and severe work of practice and instruction relating to the horse and cavalry tactics generally; these alone requiring more time than they ever have been allowed by our impatient policies and exigencies.

This preliminary instruction in infantry tactics, with differences, and great additions to what cavalry would ever be called on to perform (in excess and exaggeration, it is thought of the author's instructions), the eightfold puzzles which have been quoted, and a few other movements, which have been described or mentioned as *impracticable* for cavalry and useless and dangerous to either arm, constitute the important results of assimilation and harmony. (The changes of names are childish, but mischievous too, as childish things are apt to be.)

And these valuable gains have somehow been complemented by others extraneous, to wit: the addition to the work of the cavalry, which always requires much the most time for instruction, the preliminary study and practice of another arm, including some differences and defects which the trooper will have to "unlearn." Also the almost doubled work of two

cavalry systems—single and two rank formations—besides the single and double rank of the trooper's infantry education.

And not least, a work which in substance and tone must change and depress not only valuable action, but the spirit, style, and dash peculiar and important to this arm, as the cavalry eye (which has been much emphasized in print, indicating that the commander's eye must be very sharp and quick to harmonize with the style of movement required of cavalry.)

The legend of finest Greek imagination is far outdone by the modern Procrustes, who would torture to its death free-riding cavalry by repression to the infantry scale.

What was meant by the first order for assimilation should sensibly have been assumed to be that in revisions of tactics for all arms, late inventions and improvements should be well considered, and in how far applicable, as principles, to such arms. Such as the ignoring of inversions, the adoption of the columns of fours, single and doubled, for both cavalry and infantry; agreeing upon the same signals in their nature applicable to all troops. Beyond such as these it has been a blunder and a pretence.

These desirable objects would have been attained by intelligent and experienced efforts to make the tactics of each arm the best possible for that arm.

The material constitution, the formation and duties of the three arms are different even to contrast; their methods, motions, and arms are as "nearly *unlike* as possible"; and "tactics" means the representative and orderly development of these differences. Consider only that the cavalry regiment has in this work three "battalions," and the infantry only one.

The attack and defense of infantry are mainly the same—by the far-reaching fire of small arms; even the superior force uses the protection of breastworks. Cavalry can scarcely defend itself, but must attack with weapons only available in contact. Artillery is passive, as the rule; only aggressive at a distance; it is defenseless, and always guarded by the other arms.

The attempt, as Colonel Upton was instructed, "To make a system of general tactics for the three principal arms of service, as near alike as possible," for these very opposites in

spaces covered, in speed, and work to be done, could only result in the failure that we have seen.

The cavalry is always a force apart, under its own general. No word of command is ever applied to more than one arm. Cavalry is not put in line with infantry; is reversed generally; is at flanks or at the rear—detached, if not technically so. It properly is authorized to act without superior orders; watches the opposite cavalry; waits for the *moment* of opportunity to charge a half-beaten infantry; it finishes things in its own way. It is apt to be in front on the advance, behind in the retreat. It seldom marches even by the same road as the infantry.

Witness the "March to the Sea" (the longest strategic march, or succession of marches of record, and the ablest). There the cavalry column was generally far on a flank, enemyward; sometimes two marches off. *There* was "harmony," the real and only harmony of combinations inspired by a genius for war.

And is there truly "nothing new under the sun?" Are there cycles of delusions?

The writer witnessed an honest, logical attempt at assimilation. It was in the old times, after the regiment of dragoons had emerged from its cane-brake hibernation; so soon as it had received some instruction, and the horses had revived a little on prairie grass, the infantry colonel commanding—brigadier by a brevet, which, then a distinction, seemed to have unsettled him—essayed to command in a brigade drill. The dragoon regiment was paraded in a line extended to the left by the seventh regiment of Infantry. The general commanded a change of front to the right; the cavalry trotted off, pivoting on their right flank, and very soon had finished. After a time an interest was felt in the infantry regiment, and it was gratified by a distant view of it, marching leisurely through the hot prairie—a column of route. As that seemed the only kind of evolution capable of any assimilation, the general bethought him of firing; he commanded the long line to *commence firing*; then the cavalry officers in front of the line began to think it an awkward matter—not exactly "the thing,"—it was funny but warm. However, they stood fire, as did the front rank that of the second, ten feet behind.

And this "Tactics for Cavalry—including the Proceedings of the Board, General Schofield, president—assimilated to the Tactics for infantry," is solely upheld by one who professes "no knowledge or skill in that branch."

DISCUSSION OF A NAPOLEONIC MANEUVER.*

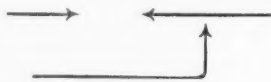
(A Cavalry Combat.)

IN the January number of the *Revue de Cavalerie*, General Paul Durand, who, was for many years the able commander of the Fourth Cavalry, outlined a cavalry engagement for maneuvers which closely resembles the favorite strategic maneuver of Napoleon: The maneuver against the rear.

General Durand's ideas are well worth considering, I will outline his ideas first and then I will compare them with Napoleon's.

MANEUVERS PROPOSED BY GENERAL DURAND.

Attack your adversary with a small fraction of your command, writes General Durand, and then when your adversary, deceived by this preliminary attack, has launched his troops against you, gain the enemy's flank at full gallop with your main body; fall on him, he is yours.



CUT No. 1.

The success of the maneuver is based upon the following remarks, which the General explains by four theorems:

Theorem I. It is difficult and well nigh impossible to determine the real strength of cavalry when they open fire at a distance of, say, 1200 meters.

*Translated from the *Revue Militaire Francaise, Journal des Sciences Militaire*, for December, 1912, by First Lieutenant A. M. Pope, Eleventh U. S. Cavalry, for the War College Division, General Staff.

Likewise if a commander waits, even for a very short time, to obtain a more exact estimate of the enemy's strength, he stands a very good show of not being deployed in time or of being obliged to charge in disorder.

Corrallary.—The preliminary attack will make the enemy deploy his forces to meet you.

Theorem II. There is a tendency in the cavalry to always try to gain superiority by superiority in numbers.

Corrallary.—The preliminary attack will make the enemy deploy a force superior to what he thinks yours to be.

Theorem III. In the cavalry, once an order is given to a unit to attack, there is never time for that order to be rescinded or modified.

Corrallary.—Once the enemy's cavalry is ordered to meet your preliminary attack, it will never be possible for the commander to recall it in time to meet your attack with the main body.

The movement on the part of the main body will take time. The question remains, will not the enemy gain an advantage from such tactics, by first annihilating the preliminary attacking force, and then flushed with victory come back to the main attack? "No," says General Durand, and he explains his reasons in theorem IV.

Theorem IV. *Mêlées* take time.

I know our men in the cavalry, like their superiors, they will slash and fight as long as they have breath in them. Did not the engagement at Ville-sur-Yron last more than three quarters of an hour?

The next question is, will not the main attack come under the fire of the enemy's batteries which will only have to change objective?

"I cannot conceive," says General Durand, "where some of our cavalry get their idea of the efficiency of our artillery. Our artillery, although without a rival in the world, is often slow in getting its data, often fails to fire due to failures to observe or errors in the service of the piece and is often slow in changing objective."

"If the enemy's batteries, as would be very possible, have opened fire on the preliminary attack, it will be a long time before they open fire on the main attack."

"The following would have to take place."

"1. Some one would have to see you. 2. This some one would have to find the commanding officer who has authority to order the change of objective. 3. Then he in turn would have to look for you and see you. 4. Then he would have to make up his mind to give up his present objective and fire at you (this takes a long time). 5. Then he has to order or have an order taken to the battery commander. 6. These in turn have to stop looking through their glasses at the points of impact and find you. 7. Then they have to work out the modifications in their data to fire at you. After they have done all this they have to do some bracketing, etc., before they can hope for effective fire against you."

"Do not ask me how long it will take. It will take a long, a very long time."

What if one of the batteries of the enemy's division has been kept on the watch?

"If the enemy's artillery has been kept in watch, that is another thing. Look out for it. Still there is a way of getting around that. Why not make a target of it? When it sees your main attack, your own artillery, it will soon get into action from such unexpected events and then your road is clear. "

As a matter of fact an effective shot with an explosive shell will not take the artillery so very long to obtain, still it will be greatly embarrassed in the face of the fast attack approaching its cavalry so rapidly.

When should the preliminary attack cease, in order to coöperate with the main body in the flank attack?

This will be when by indications of some kind as by dust clouds, you are sure that the enemy has deployed his forces.

General Durand's full text follows:

"Attack first with a small fraction of your command and follow the movement with the remainder, never losing sight of what the enemy is doing.

"Forced to counter-attack you, the enemy will have to issue orders, a fact which you can observe by the change in

position of its cavalry, the appearance of new troops, clouds of dust, etc. Now is the time for you to say to yourself 'he is *fixe*'* and you can be sure also that he will deploy many men, a great many more men than will be necessary. When from these first indications you feel that your enemy is '*fixe*' and that his troops are moving in a certain direction, then start out with your main force from the side opposite to this direction.

"Let them gain sufficient interval so that you have at your disposal the terrain necessary for the deployment of the first units of your main body and do not hurry—you have plenty of time. Take care that your enemy is '*fixe*' and that before being so he did not know what your main body was doing; that he has given his orders for reënforcing his first line; that the *mêlée* will last some time; that he is no longer able to maneuver his troops.

"Now you will find it easy to maneuver your forces on the flank at your own sweet will, choosing your own time and your own point of attack. The enemy is yours."

How large a body should the preliminary attacking force be in order to deceive the enemy? Should it be as large as a regiment, as large as a brigade?

Numbers cannot be given; it will depend upon circumstances, especially upon the terrain. In any case the attack must be supported by artillery. It is evident that the larger the attacking force the more chance there will be of making the enemy's division deploy.

Likewise the larger the force the more keenness will they have as the preliminary attacking force is bound to feel that they are being sacrificed to a certain extent.

Once our adversary deploys, if our main body surprises them when they have taken up a wrong point of attack, two brigades or even less will suffice to cut a whole division to pieces.

Is it necessary to place all of the artillery with the preliminary attack? No, it is better to keep a portion of it for

*General Durand intends the word *fixe* to mean that the enemy's troops have taken up a movement in a certain direction and they cannot readily change this.

the main attack. Besides it will be easier to assign it to a position when it is fully known where you are going and just what is wanted of it.

En resumé, General Durand's maneuvers allows the division commander to substitute for the frontal attack, that is always an uncertain question, an attack upon an enemy that has deployed in a faulty direction.

This maneuver has also this advantage:—the demoralization of the enemy before the main attack. You can easily imagine the demoralizing effect upon the enemy of the sudden appearance of our cavalry on its flank or rear when it has deployed in another direction. You can imagine how it will be stupefied and paralyzed and incapable of coherent action.

The general commanding the division has a perfect right to count on mistakes on the part of the enemy, brought on by this demoralization, and to calculate on them in his estimation of the situation, for they are going to facilitate his task.

So instead of letting the enemy come to the return attack with sang-froid, the division commander fulfills the first of his duties; that of formulating a plan and inventing a situation whereby he places his own troops in the most favorable situation for the engagement. He will have caused the moral and material demoralization of the enemy, after first having made his plans to profit by it.

This is just what Napoleon did.

THE NAPOLEONIC MANEUVERS.

In every campaign from 1796 to 1815, Napoleon employed only two kinds of maneuvers:—the movement on the rear and the movement on the center of the position.

Without taking into account the war in Spain, I have found twenty-seven characteristic maneuvers* of his against the rear. He has tried many more and planned still more:—Lodi, Castelnovo, Bassano, Arcole, Dolce, Marengo, Ulm, Hollabrunn, Jena, Pultusk, Allemstein, Friedland, Landshut, Eckmuhl, Vilna, Witebsk, Smolensk, Lutzen, Bautzen, Dresden, Duben, Saint-Dizier, Brienne, Montmirail, Soissons, Mery-sur-Seine, Saint-Dizier.

*Guerre Napoleonienne, three volumes, Librairie Militaire Chapelot.

By strokes of genius, Napoleon always managed to fool the enemy by this maneuver in just the same way each time. He has tried it from unexpected directions, and followed it up with irrepressible stubbornness, with a sense of absolute security due to admirable foresight. The plan is one thing, the way that it is carried out is another.

Consider the maneuver of 1806:

Napoleon, on watch behind the Franken-Wald, first sends out a preliminary attacking force under the King of Holland to draw the Prussians towards Westphalia, then he delays until the enemy takes the offensive. Immediately, then, he throws his army into Saxony, to intercept there, before the battle, their various lines of retreat. When this is done and not until then, does he turn against them and overwhelms them at Jena and Auerstadt.

The King of Holland's demonstration in the preliminary attack:

On September 20, 1806, Napoleon wrote to the King of Holland, "You should have inserted in your gazette that a considerable force is coming from all points of France. I want those troops put in march the first part of October for the purpose of making a counter attack, it would be perhaps better to say a false attack, so as to draw the attention of the enemy while I make a turning movement."

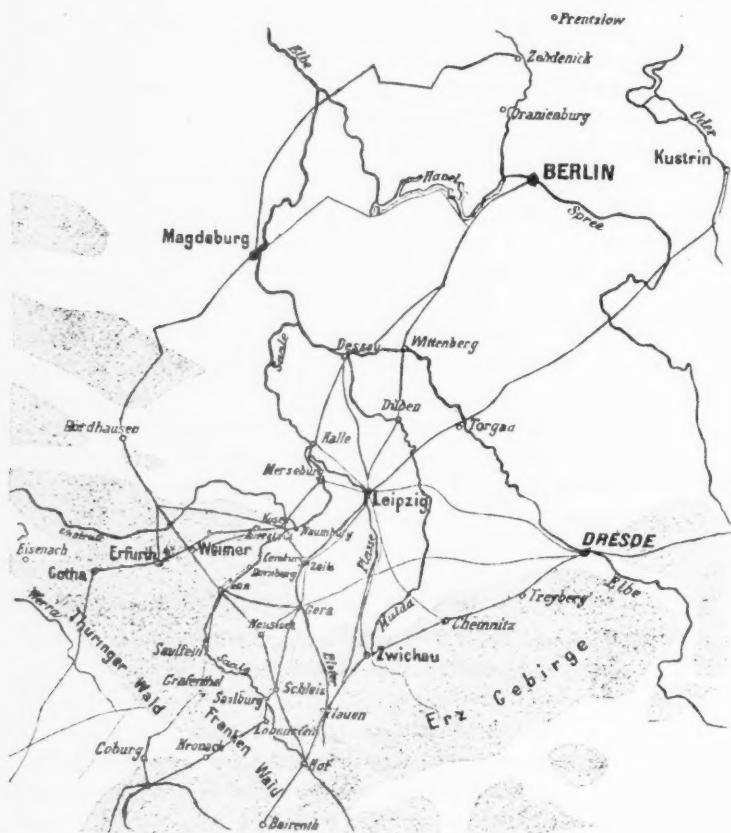
We shall see in this movement of Napoleons all the advantages that we spoke of above.

1. Demoralization of the adversary:

On the 5th of October, Napoleon moved out his main force across the Franken-Wald; he knew that the main body of the enemy was concentrated on Erfurt. On the 12th he writes in his bulletin:

"Turned on its left flank, due to an error of judgment at the very moment when it was about to enter upon a most hazardous combination, the Prussians are at the very beginning in a very critical position. On the 12th the French army occupied Saalfeld and Gera and marched on Naumbourg and Jena. All the letters intercepted indicate the King's councils are torn by different opinions which are always deliberate but never in agreement; uncertainty, alarm and fear are already taking the place of arrogance, lack of consideration and folly."

And on the 13th:—"All letters intercepted say that consternation reigns at Erfurt where the King, the Queen and the Duke of Brunswick still remain, and that they are still discussing the course to pursue but cannot come to any decision.



CUT No. 2.

"Still while they are deliberating the French army marches on. The enemy cut off from Dresden, was still, on the 11th, trying to get its troops together which it had sent to Cassel and Wurzburg on some offensive project, wishing to open the campaign by an invasion in Germany. The Wisser where they are having batteries emplaced, the Saale where they are likewise trying to make a defense, and the other rivers are turned somewhat as the Iller was last year, so we find the French army moving along the Saale with its back to the Elbe, marching on the Prussian army which has its back on the Rhine, which is such a hazardous position for it that events of importance are almost sure to happen there."

On the 13th, still in the fourth bulletin:

"Things are happening rapidly. The Prussian army is surprised in flank, its magazines raised, it is turned.

2. *The advantage of avoiding the always doubtful frontal attack in battle.*

On the 12th Napoleon wrote to Lannes:*

"All the letters that have been intercepted indicate that the enemy has lost its head. They hold counsels of war day and night and do not know what course to pursue. You will notice that my army is altogether and that it bars their road from Dresden and Berlin."

"The art lies in attacking today whatever we meet, so as to whip the enemy in detail while they are getting together."

And to Murat:—

"I will be, before noon today at Gera. You can see by the situation of the army that I completely surround the enemy, but I want information as to what they are going to do. I hope that you can get this for me at the post office at Zeitz.

*In the campaign in France in 1814, on the 17th day of March, after the battles of Craonne and Laon, leading his forces against the Bohemian army, we find Napoleon hesitating between three courses:—1st, to throw himself on the rear of Schwarzenberg; 2d, to join Macdonald and Oudinot at Provins; 3d, to gain Meaux so as to precede the enemy on the way to Paris. These projects he writes, each have their own characteristics. The first is the most hazardous and gives the most unexpected results. The third is the safest because it leads at once on Paris, but it also, on account of having no moral effect, leaves all to the chance of a great battle, and if the enemy numbers 70,000 or 80,000, such a battle will be a tremendous chance. (Correspondence No. 21506.)

"You saw what I did at Gera, go and do likewise: attack vigorously everything that is on the march. Some of the enemy's troops are trying to get to a point of rendezvous, but the rapidity of my movements prevents them from receiving counter orders in time. Two or three advantages of this kind will result in the wiping out of the Prussian army, and when that is gone we may find it to our advantage to bring on a general engagement."

3. *The possibility of keeping the force in hand up to the very last moment:*

On the 5th of October, 1806, Napoleon wrote to Soult:—

"With this immense superiority of forces all rendezvoused in a narrow space, you see that I am in the position of hazarding nothing, but of being able to attack the enemy wherever it wants to make a stand and with double their force.

On the 12th of October, he writes to Lannes:—

"You see that my army is all together."

To attack the enemy in disorder and disunited is, in short Napoleon's aim.

At Saint Helena, in his discussion of "Notes on the Art of War," by General Rogniat, he wrote *à propos* of his movements at Smolensk:—

"Napoleon then executed that beautiful maneuver which is the exact counterpart of the one before Landshut in 1809; he concealed himself by the forest of Bieski, turned the left (the rear) of the Russian army, crossed the Borysthene, and moved on Smolensk where he arrived twenty-four hours before the Russian Army, which retreated in all haste. A division of 15,000 men, which was found there by chance, had the good luck to defend this town a day, which gave Barclay de Tolly time to arrive the next morning. If the French army had surprised Smolensk, it would have been able to have crossed the Borysthene there, and attacked the Russian army in rear while it was scattered and in disorder."

Let us study the Napoleonic maneuvers a little.

Risks run in making the preliminary attack:

In 1796, in the Lodi campaign, the preliminary attack was the demonstration for the capture of the passage of the

Po by main force, made in front of Beaulieu at Valence by the different divisions of our army that were moving on Tortone. While that was going on our advance guard was exerting all its strength to get the bridge at Plaisance where the whole army was going to cross the Po in rear of the Austrians.

In 1805, the preliminary attack was the demonstrations made by Lannes' corps and the dragoons of Baraguey d'Hilliers, on the roads leading from the Black Forest, while the army executed the great turning movement in rear of the Austrians position along the Iller.

In 1809, the preliminary attack was made by Davoust's corps and the Bavarians, who made a demonstration before the Archduke Charles while Napoleon hastened on Landshut with his main body.

The preliminary attack runs the risk of being assailed by a superior force, but Napoleon counts on the fact that the news that the French army has come up in rear and is cutting off the lines of retreat will soon recall the enemy to the rear.

In 1807, in the second note to the King of Holland, he writes:—

"The observations of my first note are all a matter of foresight. My first marches threaten the heart of the Prussian monarchy, and the deployment of my forces will be so imposing and rapid, that it is probable that the whole Prussian army of Westphalia will concentrate on Magdebourg and that it will set out to defend the capitol."

Furthermore the preliminary attack always has recourse to retreat.

On the 18th of April, 1809, in the maneuver on Landshut, Napoleon wrote to Messena:—

"Prince Charles came out yesterday from Landshut on Ratisbonne * * * ; the Bavarians have been in contact all day with his advance guard. Today the 18th, the Bavarians can still continue to harass him without great risk, since they always give ground, yet they harass and retard just as much the movements of the army this way."

The strategic pause:

As there is, after the launching of the preliminary attack, a short pause (tactical pause), by the division commander to

observe what the enemy is going to do, so in each of Napoleon's maneuvers there is a strategic pause to observe what his adversary is going to do.

Such a pause is well marked in the early part of the campaigns in 1806 and 1809.

After we compare General Durand's scheme with that of Napoleon's, we must closely study the execution.

The study of Napoleon's principal maneuvers affords the most useful source of information.

Rapidity of evolution:

To be able to move rapidly is the first condition of success.

General Durand has worked out a system of evolutions whereby he can move rapidly because of the great suppleness of the movements. The reader can find an account of this in the Cavalry Review of last April.

Napoleon believed in the supple organization of the army corps and instituted his system of marches so as to accomplish this rapidity.

Order of march of the main body:

How must the main body march?

When the roads leading to the front admit it, Napoleon marches in three columns: the column on the side towards the enemy serves as a fixed or mobile flank guard against fractions of the enemy or allies that might eventually approach.

In 1806, the corps of Lannes and Augereau who formed the left column, served as a flank guard against the Prussian army, while the corps of Soult and Ney, who formed the right column, were at first destined to be the fixed flank guard on the side towards Dresden, where Napoleon feared the arrival of the Russians and Austrians.

Soon when everything was quiet on that side, Napoleon called in Soult and Ney who then were able to get into the battle of Jena.

This arrangement should be imitated in cavalry.

I can make no further comparison on the maneuver against the rear and that proposed by General Durand for the cavalry combat, so I conclude.

The maneuver proposed by General Durand gives the division commander a chance to attack with his force well in

hand against an enemy that is charging in the wrong direction and is demoralized.

With his brigadiers near by, the division commander can wait until the last minute before he makes the disposition of his forces and can then employ them to the best advantage, as the occasion demands.

Colonel CAMON,
Brevete d'etat-major.

NOTES ON THE ORGANIZATION OF A CAVALRY DIVISION.*

THE cavalry division is the largest unit into which this branch of the service is organized. Since it is needful that the scope of its instruction and preparation should correspond to the requirements of the various classes of duties which it may expect to be called upon to perform, and which are clearly set forth in the "Regulations for Service in War," it is evident that its organization must be such as will enable it to satisfy the complex demands which will arise from its employment in war.

The truth is that organization, instruction, and employment in war, are three factors which are very closely related to each other. It is indispensably necessary that the first two of these factors should be properly attained in time of peace, in order that the cavalry division should be brought into a condition which will admit of its conveniently preparing itself for doing the work which is to be expected of it in campaign.

It appears that the principles which have a bearing upon the regulation of these factors are variously estimated and appreciated in different armies and it is therefore believed that it will not be inopportune to undertake a brief examination into the organization of their cavalry divisions, giving due consideration to their training and instruction and to the

*Translated from the *Revista di Cavalleria*, May 1911, by Captain W. H. Paine, Seventh Cavalry, for the War College Division, General Staff, U. S. Army.

classes of duties which they are expected to perform, and seeking to obtain useful suggestions regarding the organization of our own cavalry.

* * * * *

One of the first questions to present itself is that regarding the permanent organization of the cavalry divisions including time of peace, this being a question which has been warmly discussed during the past few years and which still continues to receive attention in Germany.

At the present time, the German is the only one of the great armies of Europe, which, with the exception of the Cavalry Division of the Guard, has in time of peace organized its cavalry regiments into brigades only, these being attached to the infantry divisions.

It should be said, however, that the principal German authorities on cavalry subjects, with the exception of General Von Bernhardt, are in favor of the organization of a certain number of cavalry divisions, even in time of peace.

The opponents of this system, and among these is to be counted the General Staff, in whose hands rests the decisions as to the courses of action to be adopted in regard to it, are not ignorant of the important advantages which it offers, some of them being readily admitted and indisputable. Among the principal of these advantages are quick mobilization and an intimate acquaintance between the generals, the other officers, and the troops. But there are, on the other hand, other and equally important advantages to be derived from the existing organization, among them being:

The selection of general officers who have shown themselves to be most competent since the numerous temporary divisions which are organized every year for the grand maneuvers, and for the special maneuvers of the different arms of the service, furnish opportunities for many generals to gain experience and to exhibit their respective abilities.

The inability of the enemy to certainly calculate upon the size of the divisions and upon the probable methods of their use and employment.

But it does not seem necessary to dwell at great length upon a question which is no longer of much interest to us, since in

accordance with the best general opinion we have within the past few years maintained three divisions which we regard as being useful and desirable. And we have done even better, since our brigades are not even permanently organized, as they are both in France and Germany. There is, however, one important question which demands our attention, and this is the one regarding the proper composition and strength for the division.

Let us begin the consideration of this question by inquiring what has been done in this respect, in the principal European armies.

As has already been stated, the Germans have in time of peace only one division, the Guard Division, which consists of four brigades of two regiments each, with a total of thirty two squadrons in time of war.

There are one hundred and two regiments of cavalry in the German army, and since the Guard Division contains eight of them, there remain ninety-four others which are available for use in forming the cavalry divisions and for the divisional cavalry. Something will be said further on about the last of the above mentioned uses of the cavalry. However, it is not thought to be out of place to say here that there is in Germany, much discussion of the question as to the amount of cavalry which is needed by the infantry divisions and it is unanimously admitted that the assignment of a regiment of four squadrons according to the practice in the Franco-Prussian War, is much in excess of actual requirements. It has therefore, recently been proposed to assign only one squadron to each infantry division, and to create special detachments of "Meldereiter" for the services of scouting in the immediate vicinity of the division, and for orderly work and similar purposes which comprise the principal duties of divisional cavalry.

We may observe here, that the cavalry divisions of the army, if provided with artillery and machine guns, ought to be able to operate and sustain themselves independently except in the case in which resistance is offered by an enemy consisting of all three arms of the service, and which absolutely prevents an advance. In such a case, which might present itself for example, while gaining contact with very strong bodies

of the enemy in positions, the "Regulations for Service in War," admit the desirability of assistance from infantry and bicyclists.*

From the little which has been said, it may be concluded that beyond doubt, the Germans have much which they desire to conceal from their probable adversary, France, in regard to such things as the strength and organization of their large units of cavalry." These units may be divisions, or perhaps reinforced brigades; they will be formed at the time of mobilization and there will be a large number of them.

In France there are eight cavalry divisions, not all of them of the same strength. The 1st, 2d, 5th, 6th, and 8th Divisions consist of two brigades of two regiments each. The 7th Division has two brigades, one of them consisting of two regiments and the other of three. Finally, the 3d and 4th Divisions each consist of three brigades of two regiments.

Therefore, five of the Divisions have a strength of sixteen squadrons, one has twenty squadrons, and the remaining two have each twenty-four squadrons. The total is thirty-seven regiments with one hundred and forty-eight squadrons.

The other forty-four regiments, not including the ten regiments of African cavalry, each of these brigades consisting of two regiments with the exception of the 7th and the 20th, which have three regiments each. One brigade is attached to each of the army corps, that bearing the same number, with the exception of the Sixth Army Corps which has two of these brigades designated as the Sixth and the Sixth-Bis (i. e. 6 1-2.)

One cannot help being struck by the disproportion between the numerical strength of the cavalry force which is to be assigned to the general work of the army, and that which is intended for the army corps. In the cavalry divisions from which are expected the execution of the most important strategical and tac-

*There is no organized detachment of bicyclists maintained in the German Army in time of peace, and none has ever been formed for use in their Grand Maneuvers. German military writers are in general opposed to bicyclists, because they require good roads and are unable to travel across the fields. It therefore causes something of a feeling of surprise, to find this mention of their possible employment. This is the only mention which is made in the entire book of regulations regarding bicyclists.

tical duties, there are thirty-seven regiments, while there are to be forty-four regiments with the army corps. It is true that the Regulations assign certain important functions to the cavalry, which is assigned to the army corps, but after all, these functions are limited and are not to be compared in importance with those properly pertaining to the cavalry divisions.

Therefore, among the topics of the day, which are receiving attention, are propositions for a new organization for the cavalry. Without attempting to go into the details of these propositions, their substance is about as follows:

The abolition of the brigades of cavalry which are attached to the army corps, and which are declared to be almost useless. The fact is that each of these brigades would be expected to furnish two squadrons, one from each regiment, for service with the two divisions of the corps, thus leaving the cavalry brigades with but six squadrons each and these of a strength almost ridiculously small for the accomplishment of any efficient and valuable work. Furthermore, one very important result of this method of using the cavalry is that it leads to the subdivisions of a really very large force of that arm, into small fragments with all of the well known consequences which are always derived from such a course. A recent instructive example of the application of such a system can be found in the systematic subdivision of the Russian cavalry in the campaigns in Manchuria. This employment of small bodies and subdivisions has been much criticised, especially at the battle of Liao-Yang and at Mukden, where if the cavalry had been assembled in a large mass upon the plain at the right wing instead of being scattered in small detachments along the immense front of battle, it might have been able to play a decisive part in the conflict, while it did actually accomplish only a secondary part.

It is therefore proposed to gather all the cavalry into cavalry divisions, with the exception of a small part of it, which should be assigned to the infantry divisions as divisional cavalry.

Up to the present time, no official steps have been taken which would indicate the intention of the French Government to increase the existing number of cavalry divisions. But the

fact that during the period for summer training, numerous brigades of the cavalry assigned to the army corps have been assembled into divisions and given practice in the duties which are expected of the main cavalry force of an army, affords safe ground for the belief that in high military circles, there is being nurtured some intention that in case of war, there shall be made quite a different disposition of these brigades, or at least of a considerable number of them, from that contemplated in the arrangement of the present organization.

It is said that some consideration is being given to plans for the restoration of the Inspectors of Cavalry, which were abolished some years ago, with four or five brigades to be placed under their supervision. These inspectors would not only supervise and direct the instruction and training of the brigades during the year, but they would assume the command of the provisional divisions to be formed during the summer exercises. From this course would result two important advantages; one of them being that the inspectors general would thus become thoroughly acquainted with regiments and would be correspondingly well known to them; the other being that there would thus become available a certain number of general officers of cavalry who would be well experienced in the management and command of their troops, the usual experience being that in time of war, there is a shortage of such general officers.

We may further remark, that in the grand maneuvers of last year, nearly every infantry regiment made use of eight mounted scouts, which appear to have rendered very useful services. It is now proposed to rely upon these infantry mounted scouts, having them permanently assigned to the regiments, it being thought that, as they will be trained and experienced with their own arm of the service, they should be able to discharge their proper duties in general, to better advantage than would be done by cavalry, and that on the whole the best results will thus be attained. In consequence of these experiments recently completed in France, with mounted scouts, there is in Germany an inclination to organize the detachments of "Meldereiter," which have been mentioned.

From all that has just been said, it will be seen that we cannot state with certainty, precisely what form of organization

would be adopted by the French cavalry in case of war, but it is safe to assume that there would be considerable changes from the existing peace arrangements, and the changes can be expected to result in a more advantageous employment of this arm of the service, and consequently, in the greater ultimate efficiency of the entire army.

In the Austro-Hungarian Army, not including the two "Landwehr" with their cavalry, there are forty-two cavalry regiments, organized into nineteen brigades of two regiments each, with the exception of the 3d, 4th, 16th and 21st brigades which consist of three regiments.*

Fourteen of these brigades are organized into six permanent divisions which are designated by the names of the cities in which the division headquarters are located. The divisions are not uniform in strength and organization.

They are named and described as follows:

The Divisions of Kracovia and of Jaroslaw which consist of two brigades of two regiments each, a total of twenty-four squadrons for each division.

The Division of Temesvar, which consists of only two brigades, but one of them, the 4th Budapest, has three regiments, the 8th and 10th Hussars and the 12th Uhlans, making a total of thirty squadrons for the division.

The Divisions of Vienna and of Pozsony, each of which has six regiments, thirty-six squadrons, but the Vienna Division has three brigades of two regiments, while the Pozsony Division has two brigades each of three regiments.

Lastly, the Division of Stanislau, consists of three brigades, two of which have two regiments each, while the third, the 21st Brigade of Lemburg, has three regiments. The Division, therefore, contains seven regiments, or a total of forty-two squadrons.

In regard to the strength and composition of the cavalry divisions in the Austro-Hungarian Army, it may be observed that there is a variety from which to suit any taste. There are

*The brigades are numbered from one to twenty-one, but the 2d and 19th were broken up and have not yet been reorganized. The same thing is true of the Uhlan regiments, of which there are eleven, but their numbers run from one to thirteen.

divisions having four, five, six and seven regiments, and, therefore, containing twenty-four, thirty, thirty-six, and forty-two squadrons, these squadrons being the largest that are found in any European army. Some of their brigades are of two regiments and some of them are of three.

The consideration of this important subject will be taken up farther on in this article.

The remaining five brigades are called "independent," and are composed of two regiments each. They are under the command of the chiefs of their respective army corps.

But there are other considerable forces of cavalry in the Austro-Hungarian Army. The Austrian Landwehr contains six regiments of Uhlans, and in the Hungarian Landwehr, there are, ten regiments of Hussars or "honved." The latter only are organized into brigades of which there are four, the 1st, that of Szegeled, and the 4th, that of Debreczen, having two regiments each, while the 2d, that of Budapest and the 3d, that of Pecs, have three regiments each.

The organization of these regiments is the same as that of the regiments of the regular army, the only difference between them being in the number of men who are kept under arms. The staffs and outlined strength of the squadrons and the larger units, are sufficiently ample, but the number of men to a squadron is limited to from sixty-three to sixty-nine, while the number of horses is from forty-three to sixty. The men and the young horses receive the regular normal course of cavalry instruction and training. But when the term of instruction and training is completed, the surplus men not required to fill the organizations, are permitted to go on leave, and the extra horses are turned over to citizens for use with a requirement that they shall be returned to the organizations within twenty-four hours after the issuing of orders calling them in. The term of enlistment is two years, which is the same as for all the other troops of the Landwehr service.

The special system of organization for these regiments would not in any other country, indicate either their capacity for quick mobilization or their cohesion and ready state of preparation for war. But the thorough nature of the provisions of their regulations in regard to the instructions of

recruits and the training of young horses, the annual assembling with their organizations of the men who are on leave, and the calling in of the horses which have been intrusted to the proprietors of farms or country estates for the summer exercises, which extend over a period of four or five months, and the special conditions existing in the Austro-Hungarian dominions which possess in Galicia and Hungary an ample supply of men accustomed to horsemanship and of horses adapted to the requirements of military service, all warrant the most confident prediction that this cavalry force would be called out in case of war.

The fact is, that the cavalry of the two Landwehr together with the other troops of those bodies, forms a part of the forces of the first line. There is no doubt that it can be so regarded.

It remains to be mentioned that the cavalry brigades of the Hungarian Landwehr, the "honved," are also nearly every year assembled into divisions for the maneuvers of the summer period, and this cavalry force, like that pertaining to the Austrian Landwehr, has participated in the grand maneuvers.

There also exists in the Austro-Hungarian Army, a body of one-half a regiment, three squadrons, of mounted chasseurs of the Tyrol, and another similar body of mounted chasseurs from Dalmatia.

Through these two half-regiments of mounted chasseurs, the ultimate design is made evident. In regard to the other fifty-eight regiments of cavalry, would any one readily fall into the error of concluding that from the manner of their organization in time of peace, it would be safe to assume what would be their formation and assignment to duties in case of war?

It must be considered that the entire military establishment of the Austro-Hungarian Empire with its skeletonized armies has until recently presented serious deficiencies in regard to shortage of men, and restricted resources in funds. In order to remedy these deficiencies, there are required at the present time, an expenditure of many millions in money and an increase in the annual contingent of recruits.

It must however be admitted that the cavalry, in so far as concerns its strength in men and horses, has not been at all

affected by the troublesome conditions under which the other arms of the service have been laboring, at least this appears from here to be the truth. But it is certain that it is upon economic grounds that we would seek for the principal reasons for the organization of the huge cavalry divisions which are stationed at places more or less near to the Italian and Russian frontiers for the purpose of guarding them.

It is for the same economic reasons that the regimental organization of six squadrons has been adhered to, although it is recognized that this makes the regiment too large. There has, however, finally been a plan proposed for reducing regiments to five squadrons each.

For these reasons, and on account of still others which will be mentioned later on it is believed, as has already been stated that the peace organization of the Austro-Hungarian Army affords no grounds for much inference as to what its organization would be in case of war.

It is quite worth while to clearly point out that the Austrians are following the strictly correct and most advantageous systems of organization by the formation of real bodies or masses of cavalry, and that they are assigning the greater part of their cavalry regiments to the large cavalry units.

Let us now pass on to a consideration of the Russian cavalry. As it is desired to confine this article within the shortest limits no real examination, not even a brief summary, can be undertaken of all of the cavalry troops which are maintained by the Russian Empire for this would unavoidably consume too much space. However, it is not really necessary, to do that in order to accomplish the purpose of this modest study, and it is thought that it will be sufficient to make a few remarks about the cavalry forces which the Russians maintain in Europe.

There are twenty-four divisions of Russian cavalry in Europe. They are as follows: Two divisions of the Guards, fifteen divisions pertaining to the line of the army, one mixed division, one division from the Caucasus, and five divisions of Cossacks. There are also two independent cavalry brigades kept in Europe with five others in Asia.

The cavalry divisions consist normally of two brigades, one of them having two regiments of dragoons, the other one

regiment of dragoons and one regiment of Don Cossacks, making a total of twenty-four squadrons for the division. The First Cavalry Division of the Guards forms an exception to the uniformity of this organization since it consists of three brigades, and it is to be understood that the Cossack divisions are wholly made up of Cossack regiments.

The two independent cavalry brigades stationed in Europe are each composed of two dragoon regiments of the regular line of the army.

In the military district of Warsaw there were formerly two cavalry corps, the 1st, composed of the Fifth and the Mixed Divisions, and the 2d composed of the Sixth and the Fifteenth Divisions but if the memory of the writer is not at fault these corps have recently been broken up.

Therefore all of the Russian cavalry which is kept in Europe is organized into large units and is attached to the army corps. From this system there results certain notable advantages and certain serious inconveniences. The advantages arise from having the cavalry organized into strong divisions and independent brigades even in time of peace. The disadvantages and inconveniences show themselves at the opening of a campaign and become more and more evident during the progress of operations when it becomes necessary to make arrangements for furnishing the necessary cavalry for the armies and the divisional cavalry for the infantry divisions. It is thus that there arose the conditions which existed in the Russo-Turkish War of 1877-78, and which were repeated in the campaign in Manchuria in 1904-05. One by one the Army Corps are deprived of their cavalry in order to advance it to the front for scouting or covering service. From some of the army corps there will be taken away a brigade or two or three regiments or one single regiment, or even two or three squadrons in order to provide detachments of cavalry to meet the necessities of the moment which has arisen in the cases of other army corps or infantry divisions which have been left without any cavalry at all. And this in turn leads to a continual subdivision followed by mixtures of the large and the small units. And as if all this were not enough of mischief there is the additional disadvantage of separating the troops from their own

proper leaders who are acquainted with them and who are known to them and placing them under chiefs who have never seen them. And there is also a complete disorganization of the various units which have existed in time of peace.

In case of an important European war it is not improbable that in the plans for mobilization some account would be taken of the tendency to constant subdivision and intermixture which developed during the Russo-Turkish War. It is quite likely that steps have already been taken to fix upon the cavalry divisions which are to be assigned to the armies, and upon these regiments which are to be attached to the army corps and to the infantry divisions. In connection with these subjects it is not thought desirable to dismiss without remark the fact that in respect to the organization and utilization of the cavalry there has been a repetition in the extreme Orient of the same grave inconveniences which were developed in the Russo-Turkish War and which were severely criticized or condemned by the European Military writers who occupied themselves with the study of that campaign.

It is true that it was not believed in Russia until the last moment that the Japanese would dare to take field against the great Russian Empire and in consequence of this the preparations were incomplete and it became necessary to resort in great measure to improvised organizations and arrangements, one result of all this being that many months elapsed before the Russians succeeded in assembling their enormous mass of cavalry upon the theater of war. But after all when we consider the poor use which was made of the cavalry on the part of the commander-in-chief, by the army commanders and finally by the very generals of the cavalry themselves, there no longer seems to be anything very strange in the system of organization and employment which we find to have been adopted there, or that is to make a clearer explanation of the meaning, the assignment of the cavalry to the larger units.

But it is at least true that in the Russo-Turkish War the very force of circumstances made it necessary to assemble some real masses of cavalry for use in such operations as cutting the communications of Plevna, for accomplishing the passage of the Balkans, and in executing the march to Constantinople.

In the campaign in Manchuria, on the other hand, there was but one assemblage of a large body of cavalry when seventy squadrons were gathered by taking them here and there from the different army corps and they were then intrusted to the command of General Mischtschenko for that famous raid upon Inkeou which resulted in the most absurd parody on that variety of operations.

It, therefore appears to be clearly demonstrated by all that has just been said that it is not sufficient to have in time of peace the best possible organization, which is now the case with the Russian cavalry. It is most absolutely necessary that its distribution and assignment in the dispositions for battle in time of war should correspond to the nature of the requirements which it would be expected to fulfill in a campaign, and this should be prearranged in a clear and exact manner.

The past history of the Russians is certainly not lacking in useful material for their instructions. This is all the more true and pertinent when it is considered that we are studying an army which has at its disposal an almost fabulous amount of cavalry. In the standing army in time of peace, there are twelve Guard Regiments, fifty-four regiments of dragoons and seventeen regiments of Don Cossacks of the first "Bando" or line, without counting the regiments of Orenburg Cossacks, those of the Ural, of Kuban, of Astrakan, of Terek, of Siberia, of Semirjetschensk, of the Trans-Baikal, and various other independent half regiments or "sotnias" of Cossacks, all of the first line. In time of war there would be available from the regiments of the standing army and from the First, Second and Third "Bandos", or lines there would be a mass of something like one thousand, eight hundred squadrons and sotnias.

With such an enormous force of cavalry, not taking into account the regiments stationed in Asia since they would not be able to reach a European theater of war until after the lapse of a considerable period of time, it is evident that they would properly be regarded as hardly more than a surplus force of this arm. A predisposition to so regard it would arise from the large masses of cavalry which would be available for assignment to the armies, to the infantry divisions, and even to the army corps if it should be so desired. In all of the other

armies of the world it is necessary to take into account the available number of regiments and squadrons but in the Russian Army there is no embarrassment except that of making a choice.

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Within the past two years the organization of the Italian cavalry has undergone substantial modifications. The former twenty-four regiments of six squadrons have been reorganized into twenty-nine regiments of five squadrons each. The number of squadrons has been increased from one hundred and forty-four to one hundred and forty-five, an increase which is really of very little importance. What is of importance, however, is the fact that an actual improvement has been effected by making the regiments less cumbersome, more readily handled, and on the whole better adapted to the national terrain. Another item worthy of mention is the organization of three cavalry divisions each composed of two brigades of two regiments which is a measure that will result in inestimable advantages in the way of their preparation for war in time of peace and of their more efficient employment in war itself when a war does arise. The measure of the organization of the divisions has beyond doubt much more significance and importance than the reorganization of the regiments.

The Italian cavalry division is however quite a strong one, consisting of twenty squadrons. The organization of the three divisions has included twelve regiments, a total of sixty squadrons. There are remaining seventeen available regiments, with eighty-five squadrons, but the uses to which it is intended that these squadrons shall be devoted are not considered proper subjects for public discussion.

These seventeen regiments are not organized into either permanent or provisional brigades, but they constitute "groups." Two of these groups are under the supervision of major generals of cavalry, the remaining ones are under the surveillance, so to speak, of the major generals commanding the cavalry divisions.

This is of course only a temporary kind of organization which it was probably thought advisable to adopt in order to avoid any further increase in the heavy expense which was

incurred through the reorganization of the cavalry, and also in order to avoid making any increase in the number of major generals of cavalry which were thus diminished by one. The writer confesses to a strong presentiment that this temporary arrangement will have the shortest practicable duration.

As has been said above it is not intended to enter upon any discussion as to what is to be the disposition of the above mentioned regiments of cavalry in case of war. But an attempt will soon be made to make a detailed study into the organization of the Italian cavalry divisions, and occasion will also be taken to express the ideas of the writer in regard to the regiments not included in the division.

* * * * *

The reader who may have taken the trouble to follow this article up to this point will certainly have observed that in the discussion of this subject of the organization of the cavalry divisions not even the briefest mention has been made of the artillery organizations and the machine gun detachments which would of course form an integral part of these divisions, neither has anything been said of the detachments of infantry and of bicyclists which may according to the regulations of all the modern armies form a part of the divisions or else be attached to them. In the Italian Army the bicyclists normally form a part of the cavalry divisions. Most probably the reader will consider the avoidance of the mention of these topics as due to inadvertence or worse, but the truth is that this has been done purposely.

What good object can be attained by taking the time to discuss the horse artillery which would be joined to the cavalry divisions in accordance with the normal plans for forming these divisions in case of the mobilization of the armies? About the same principles are applied in this respect in all modern armies so that this artillery force is found to be in general about two, or at the most three batteries.

And what advantage is in prospect from the extended consideration of the use of machine guns about which there is so much enthusiasm, in view of the data gained from the "Polygon" and from the data gained in the position battles in Manchuria? All this, furthermore, at a time when all the armies

of the world are engaged in the manufacture of machine guns with the intention of furnishing them to the cavalry and infantry. And there is not yet any definite information available as to the methods of their assignment and employment.

There still remains the important question of the infantry and of the bicyclists.

The field service regulations of the different nations indicate intentions to eventually attach some infantry to divisions of cavalry. In the French grand maneuvers of this last year there were actually one and even two battalions of infantry attached to the cavalry divisions, and not only to the divisions but even to the brigades serving with the army corps the same thing was done. Among French military writers it is continually being proposed and strongly urged that the existing detachments of bicyclists, of which there are now only five, be increased to five chasseur battalions for assignment to the large units of the cavalry.

In the Austro-Hungarian Army the normal organization of a cavalry division includes a battalion of chasseurs which is similar to the Italian plan of attaching a battalion of bicyclists to the division. The consideration of the subject of the Italian organizations of bicyclists will be undertaken in another article.

SOME DEFECTS OF OUR CAVALRY SYSTEM.*

BY WESLEY MERRITT, COLONEL FIFTH CAVALRY, BREVET MAJOR
GENERAL, U. S. ARMY.

THERE is no country in the known world better fitted for the production of the best cavalry than the United States. The boys of our Southern and Western States may be said to live on horseback from the time they are old enough to manage a horse, and they commence horsemanship about as soon as they have learned to walk. That more of them do

*Reprinted from the *United Service* for October, 1879.

not enter the cavalry service is a radical fault of our system; the first defect met with thus being on the threshold of the service.*

The pay of the private soldier in our cavalry is all that it should be. The fare of the men in well regulated companies could scarcely be improved. It is vastly better than that of the greater number of laborers in civil life, and as good as that of skilled mechanics anywhere in our country. There can be no objection to enlisting because of low pay or of poor or insufficient fare. Nor should the discipline in the army constitute an objection to serving in it. In no instance, to my knowledge, under an officer of good standing in the service, would an intelligent enlisted man of good habits have the interior management of his command relaxed in any way. Certainly the work is not hard, nor more exacting than that of trades or professions in civil life. Then, if it is not the low pay, the poor fare, the discipline, or the hard labor in the army, which prevents more of our intelligent and industrious native young men from entering the cavalry service as a profession for life, what is it?

I think the answer to this may be found in the fact that the positions of enlisted men are not sufficiently graduated in rank, compensation, and treatment. Our service presents too few incentives to ambition. There is one dead, dreary level lying before the soldier in the line of his entering the service, with only a step or two in the way of advancement that breaks the monotony of a life-long experience, separated by a chasm of appalling dimensions from the rank of the commissioned officer, which few whose early advantages have not been great, can ever hope to overcome.

The remedy for this state of matters suggests itself. The pay of the ranking non-commissioned officers should be greatly increased. Seventy-five dollars a month, with the present allowances, would not be too great pay for men such as we should have in the cavalry service in the positions of non-

*While this statement was correct when written, a third of a century ago, it is so to a limited extent only and to restricted sections at the present day. The automobile and autocycle has changed this status of affairs.—*Editor.*

commissioned staff-officers and first sergeants of companies. There are now non-commissioned officers in the service, filling such offices, who richly deserve this increased pay. After this, one or more of the ranking duty sergeants should receive the present allowances, and from forty to fifty dollars a month, and finally the pay of the other non-commissioned officers should be graduated accordingly to their positions and length of service. Does any one doubt, if this were accomplished, that we would have a superior class of men in our service, men who would make the profession of arms their choice for life?

It is a great mistake, in my opinion, to hold out to every non-commissioned officer in the service the positive prospect of promotion, simply because he is a good sergeant or corporal. While it may be well to encourage soldiers in the belief that every private in the ranks carries a "marshal's baton in his knapsack," it should be remembered that men cannot live a lifetime of monotonous service on the hope of something better to come. A soldier's life in every position in the army should be made tolerable, the higher positions desirable, and the man satisfied that he is leading a life of reasonable competence, and preparing for an old age of comfort and ease while serving his country in the days of his vigorous manhood. Establish this, and the best young men in the country would enter and remain in our cavalry service.

Promotion to the positions of commissioned officer should be reasonably certain when well deserved. But a jealous regard to fitness for this advancement should be observed. In many instances during the early part of our Civil War, non-commissioned officers were promoted only to be ruined. True, there were instances, not by any means few, where richly deserved promotions from the ranks were made, and these were, and are still, among our best officers. But there were cases of indiscriminate promotion which made miserable good men, who ended their existence in dissipation, consequent on finding themselves in a social atmosphere for which they knew, and felt to a morbidly sensitive degree, they were not fitted. In one instance, in my own regiment, a promoted officer of this character courted and found death in battle rather than live in the, to

him, irksome bondage of a commissioned officer's life. And to my personal knowledge he was an excellent duty sergeant, and before his promotion was exceptionally well content with his soldier life. If further illustration of the viciousness of this system of indiscriminate promotion is required, let any interested inquirer take an army register of 1861-62, compare it with one of the present year, and then trace the intervening history of the promotions. Comment is unnecessary.

In this connection it is important to refer to another abuse which has existed, but which I am glad to say is not flagrant in our service. I mean the enlistment of young men of influential families, and their appointment through friends to the position of non-commissioned officers, solely with a view of immediate promotion. Such practice must be prejudicial to the service, discouraging men legitimately enlisted, whose conduct and capacity give them the right to expect all the soldier's offices available in a company.

It would require very little legislation to effect the change for the better above indicated. With it, the position of a non-commissioned officer in our cavalry service would be made desirable as a life profession for talented, energetic, industrious, and capable men, who, by their example and influence, would improve the ranks of the army beyond anything we can hope for as we are now organized. Does any one raise the objection of the expense attending this change? Five years of trial would establish the proof of its economy over the present system.

The recruits who are received into our service, as recruiting is now conducted, are of two classes: men who have served before and those who have never seen service. This latter class is the more numerous. The men who have seen service are, part of them, excellent soldiers, and the remainder very poor. These last are received partly through fraud, in disguising that they had ever been in the service, and partly through neglect on the part of company commanders, who, through a mistaken kindness, give them better "characters," on discharges than they deserve. I would appeal to company commanders to discontinue this practice, and to give no man a

character on his discharge, which will enable him to enlist elsewhere, when he would not re-enlist in his own company.

It is difficult to determine how many of the rules of the recruiting service as found in the Army Regulations, are now in force. It is very certain, however, that many important matters are neglected. Recruits should not be sent to join a cavalry regiment until after they are fairly drilled on foot and in the manual of arms, and thoroughly set up as soldiers. If, in addition to this, they could be instructed to a degree in horsemanship, it would be a great advantage. As now conducted, recruits who have never received one day's drill are often forwarded to regiments in the midst of an active campaign. What can be expected of soldiers of this character? Sworn testimony is in existence that in the campaign of 1876 against the Sioux, fully one-third of the men in some of the companies of the Seventh Cavalry were raw, uninstructed recruits at the time of the massacre on the Little Big Horn.

In the Fifth Cavalry, a large detachment of recruits joined the regiment while it was on the march to join General Crook's forces, which were confronted by three thousand Indian warriors. Is it wonderful that with such mismanagement our troops sometimes meet with disasters which shock the world?

From the nature of cavalry service, it is safe to say that an enlisted man who is not instructed before he joins his regiment, stands a good chance of never receiving a proper ground-work of military education. If he join just before a campaign, or while the command to which he is assigned is in the field, as is too often the case, he is given the little hurried instruction that may fit him to equip his horse for the march, and he manages to mount and blunder along with the command. It may be that the animal he rides escapes death or disability from the bad treatment and hard usage resulting from the ignorance of his rider. It is almost certain that the man's lack of drill is lost sight of, concealed as it is apt to be by the little knowledge that he picks up during a campaign, and it all ends by his being classed with soldiers of more experience, but of perhaps little more instruction, who a year or two before have gone through exactly the same course. Finally, these ignorant men become

an element in a company, the standard of excellence of which is continually suffering from this constant addition of uninstructed men; and it is plain to see that five years of such a system must ruin the best company of cavalry in the service.

Does any one ask why the cavalry situated in this way is not drilled and disciplined after campaign and during its stay in garrison? It goes without saying that this is done in every regiment in the service when possible. But many reasons exist against its being well done, and some against it being done at all. It may happen that the companies are campaigning nine months in the year. It may be that the weather during the only service in the garrison will prevent all drills. It is too often the fact that while troops are not on campaign they are busied building quarters for their protection. And it is certain that if men are not set up as soldiers when they first join, each day they serve makes it more nearly impossible to make good soldiers of them. It is difficult to convince a man who has campaigned for six months, and has taken part in one or more skirmishes with the Indians, that he knows nothing as a soldier and each lesson attempted, which proceeds on this assumption, is received with reluctance, repugnance, and, it may be, with disgust.

The means of remedying these evils are too numerous and too well known to need detailed mention in this paper. A few months anticipation of the necessities of the army, in recruiting for regiments, would give an opportunity to drill the recruits at the recruiting rendezvous; or, better still, would afford time to have them properly drilled after reaching the headquarters of a regiment.

During the war the defects above mentioned were not so noticeable as they are in these times of so-called peace. The men of the regiments of volunteers which entered the service came in at the same time and were equally instructed, and progressed in their knowledge steadily, constantly, and together. The regular regiments received an excellent class of recruits, in some cases transferred from the volunteers, who were perfected in like manner simultaneously.

A plea for a school for cavalry would not, I fear, be treated with the favor it deserves by the authorities in Washington.

Yet I have no doubt that a school for cavalry could be proven to be as important in every point of view as a school for artillery. This latter arm has been ridiculed by being styled a "scientific corps." The term, instead of pointing a sarcasm, should indicate a fact. Each arm of the service would be improved by regarding it as a science. The *esprit* of officers and men would be raised by a school of instruction for a part of the corps, where a high standard of theory and practice could be established, to which every company in the arm could seek to attain.

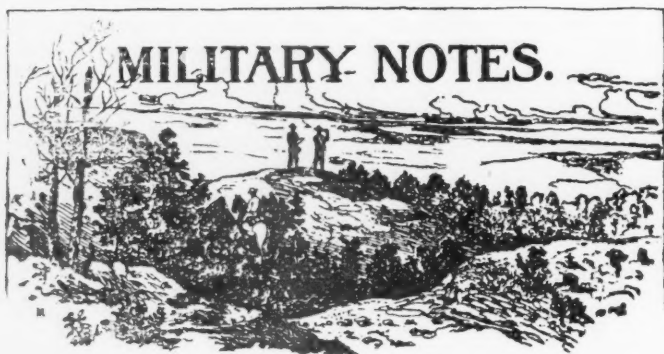
For present purposes it is not necessary to establish a particular bureau or complicated machinery of administration for the cavalry, but why not combine a school of instruction with our recruiting rendezvous? For the additional expense the government would be more than compensated by the improvement in the service. All that is imperatively needed now, is an increase in the numbers of officers for duty at the recruiting rendezvous, to drill and discipline the recruits; and the accumulation of a few companies of recruits at the rendezvous, in anticipation of the wants of the army. Is this too much to ask for the improvement of an important arm of the service?

If the practice of drilling and thoroughly setting up recruits at the rendezvous were adopted, I do not doubt that in the end it would be found a source of economy. For in this process the worthless men could be discovered and discharged, and the government thus saved the expense of transporting them to the regiment at remote stations. It would have a tendency to reduce the number of desertions by habituating a man to soldiering before joining a station among strangers.

It is not my purpose in this desultory paper to argue the importance of cavalry as an arm of the service. Those who seek to belittle it, have their reward. Statistics gathered from the Surgeon-General's office as to the paucity of wounds inflicted by the cavalry during recent wars prove nothing, except the want of fairness, or want of logic, or both, of those who use them in abusing the cavalry. Have these same persons ever turned their attention to like statistics for the artillery? Will any one, after the experience of past ages, attempt to measure

the importance of an arm—its moral effect in battle—by the numbers of men who may be picked up wounded after a fight?

To those who underrate the arm or its armament we cannot do better than to say, in the words of that accomplished soldier, Sir Garnet Wolseley, "Whether our cavalry is to be changed into mounted rifles or to remain as at present, * * * it will be, in the opinion of the writer, an unfortunate day for the (English) generals who is called upon to fight an enemy who has a proportion of good cavalry, whilst he himself has none, being deprived of them in pursuance of some cleverly-stated theory."



METHOD FOR NUMBERING ROAD JUNCTIONS ON MAPS.

THE system of numbering the different road junctions on maneuver and other tactical maps, while in general use, does not appear to follow any definite plan. Each topographer seems to follow his own inclinations in the matter.

For the sake of uniformity, and saving time to those not familiar with a particular map, a definite method of numbering the important points on roads should be adopted.

The following method is suggested as being simple, easily comprehended, and likely to fill most requirements.

A central point is selected, such as post headquarters for maps of the vicinity of garrisons; or the headquarters camp of a maneuver area, and taken as a center. Through this point a north and south line is drawn and an east and west line, dividing the area into the four quadrants. The first quadrant, north-east; the second, south-east; the third, south-west; and the fourth, north-west.

From the same center describe circles with a convenient unit such as one mile, or two and a half miles, as the first radius; and increasing each time by the same unit.

All points situated in the first quadrant have the figure 1 as the first characteristic figure of the number given them. Likewise points situated within the second, third or fourth quadrants have the figures 2, 3, or 4 as their first characteristic figures.

The second figure of the number is also a characteristic one and denotes the circle it is within. Thus all points in the innermost circle would have the figure 1 as their second characteristic figure. A point in the third quadrant and between the third and fourth circles would have as its characteristic figures 34. One in the fourth quadrant and between the fourth and fifth circles 45, and so on.

The succeeding figures of the number would be the distinctive, or individual figures applied to that particular point; and in each circle within a quadrant would run from 1 up as far as necessary. These should be arranged clock-wise so that the map reader should instinctively know where to look for them.

The advantage of this method is that anyone receiving an order to proceed via such and such points, or receiving a field message from such a point knows at once the approximate direction of the point and the distance from where he is without having to consult his map.

C. R. Mayo,

First Lieutenant, Tenth Cavalry.

INTERNATIONAL MAP OF THE WORLD.

THE first sheet of the United States portion of the International Map of the World has been issued by the United States Geological Survey and includes Rhode Island and portions of New York, Connecticut, Massachusetts, New Hampshire, Maine, and Nova Scotia. This world map, undertaken by agreement among the leading nations, is being prepared on a scale of 1 to 1,000,000—that is 1 linear inch on the map represents 1,000,000 inches or nearly 16 miles, on the earth's surface. The map is to consist of about 1,500 sheets,

covering all the land areas of the world each sheet representing 4 degrees of latitude and 6 degrees of longitude. It has been the dream of geographers for many years to have an international map, scientifically constructed on a uniform scale, and the work is now well under way. The unofficial maps, printed on all sorts of scales, in geographies and atlases, the most important areas, being allotted the greatest space, lead to misconceptions as to the relative size of the different countries. With an international map on a uniform scale the study of comparative geography will become more fascinating and more instructive.

The sheet just issued, which is numbered "North K 19" in the general world scheme, but known as the "Boston sheet" in the United States section, is printed in six colors and shows all the principal cities and towns, railroads, main wagon roads, and other works of man, and the rivers, lakes and other water features. The different depths of the ocean are denoted by contour lines, or "depth curves," and various shades of blue, and the relief, or altitudes of all parts of the land surface, by contour lines and color gradations, from pale green to brown, a different tint being used for each 100 meters of altitude.

The sheets for the completed map of the world would if combined cover an area about 150 feet by 75 feet or a globe 40 feet in diameter; the United States portion would be about 16 feet in width, a very large wall map. The Boston sheet is 24 by 25 inches and this will be the size of most of the United States sheets. The maps of areas at the far north covering 6 degrees of longitude will of course be much narrower than those of areas covering 6 degrees at the equator.

At the present rate of progress, the United States portion of the international map should be finished within eight or ten years. It will be by far the best map of the country in existence.

The Geological Survey states that there is no very accurate map of the United States as a whole, although the Geological Survey publishes a base map about 7 feet in width and the General Land Office has issued a similar map. Many of the commercial maps, though pretty to look upon, are full of gross errors.

The Boston sheet is a very accurate map and is a beautiful product of the engraver's and lithographer's art. It is sold by the Geological Survey at the bare cost of production, namely 40 cents, which will be the price of the other sheets as issued. Thus the entire map of the United States will cost \$20 80. As a preliminary to the issuance of the completed color sections of the United States portion of the world's map, the Survey is printing, in black and white, State maps on the scale of 1 to 500,000, being thus four times as large as the world's map of the same area. Already such maps have been finished and printed for Vermont, Illinois, Indiana, Iowa, Minnesota, Mississippi, and Georgia, and a dozen others are in process of publication. These are sold by the Survey at varying prices according to the size of the map.

(Press Bulletin U. S. Geological Survey.)

HORSE BREEDING IN FRANCE—HIPPOMETRICS.

M. C. BARRIER, director of the National Veterinary School at Alfort, in a report read before the 6th "Congres Hippique" in Paris, gives some data on the relative weights of the forehand of the horse, in front of the center of gravity, and the hind part, in rear of the center of gravity. The forehand weighs 12.7 per cent. more than the rear; with rider sitting in a vertical position, the forehand weighs 16.86 per cent. more than the rear; with rider leaning forward, 23 per cent. more; with rider leaning backwards 11.3 per cent. more. These figures show the necessity of loading the cantle of the cavalryman's saddle rather than the pommel. This also means that a cavalry horse should have strong loins; and a heavy head, neck and shoulders will ruin a cavalry horse or hunter prematurely as they increase the weight in front. The above weights were obtained by means of a special system of scales, the horse being placed with each foot on a separate scale. The horse used in this experiment was a saddle horse of very good conformation, weighing 1122 pounds with saddle and bridle on.

(Translated in office of Front Royal Remount Depot.)

GENERALS—SOME RECOLLECTIONS.

A MAN'S point of view changes as he grows older. It is hard to realize that this is so, that it is not the person or thing viewed that has changed. Look back at the time you entered the service, and think how you looked on senior officers. You find it hard to realize that the subaltern of to-day has just the same sort of opinion of you. To the last-joined subaltern the field officer is an old man, to the field officer the subaltern is a boy. When you were a subaltern you did not look upon yourself as a boy any more than at the age of forty-five you look upon yourself as an old man. The subaltern looks on the general as something apart, a something he is only likely to come in contact with on rare occasions, that will jump on him if he does anything really wrong or distinctly silly at a field day or inspection. Of course generals have somewhat altered with the times. My experience of generals is chiefly confined to India. They are younger than they used to be. Many years ago a general here and there played polo, but he was regarded rather as a thing apart from the game, not to be hustled and ridden off. Sometimes he regarded himself in that light, and remonstrated with anyone bold enough to transgress the unwritten law in language more forcible than polite. Now-a-days there are generals who play polo and expect to be treated like anyone else. They are young men playing the game.

Generals of old, in many cases—you might almost say in most cases—expected to be treated with very great deference, almost as if they were not quite human. When the general dined at mess a hush came over the scene. A year or two ago I sat at a table with two generals playing bridge after a mess dinner. There was no hush in that mess; in fact, a very lively rag was going on. One of the generals could not keep his attention on the game; he was itching to be up and joining in the fun. He did not do so, but he did not even remonstrate when a subaltern was violently cast into the card room, wrapped in a curtain he had pulled down on his way, on to the general's

knees. He was one of the young generals who played polo as a game. But he was a man who knew his own mind and his work, and had no mercy on anyone who did not know and do his work, as many find. He could not forget he had been a subaltern, and his heart was young. There are generals that are very unpleasant to deal with, as senior officers find out. Some are very unreasonable. I do not mean the man who gives orders and insists on their being obeyed to the letter, but the man who thinks nothing can be right that he has not ordered—that everything you do on your own must be wrong. The nicest general I ever served under was one who could, and did, talk to you if you did anything wrong; but he always gave you a chance of explaining why you did it. If you were frank with him, he always looked at what you had done from your point of view. If that was reasonable, you got off with a caution not to do it again; if you did it again, you heard all about it.

The first general I knew in India more than thirty years ago was a man who had served out there for fifty years, and only been home once. Despite his age and long service in the country, he was a wonderfully active man. When he finally retired, the horse he always rode passed through three mans' hands before he got an owner who could manage him; and only a few years earlier he had trained a horse for a big race, which he won. Until the jockey got up for the race, no one but his owner had been on his back. In his younger days he had been a noted horseman and swordsman. The records of his prowess in the latter capacity against Rohillas in the Deccan were marvelous. The older men in India in those days were very tough. It was a case of the survival of the fittest. In the early half of the last century the weaklings were soon killed off by the climate. Fancy drilling in full English kit, with high stock and shako, in the middle of the day! These men had done it, and some of them survived to tell the tale. Those that did were decidedly tough. In those days and much later the day of the general's annual inspection was a day of rush and discomfort. The reputation of the regiment chiefly depended on the turn-out and the way the march past and parade movements were carried out. The men took immense pains to turn out well; nothing

disappointed them more than for the general to take a mere cursory glance at them. Some generals, from a mistaken sense of good nature, made the parade as short as possible, much to the men's disappointment. They knew they were well turned out; they had taken a lot of trouble to be so; they wanted to be looked at; and felt that their trouble had been wasted. The luck of inspecting generals is proverbial. At a kit inspection the small book the general looks at is always the one in the room not properly made up, and the one garment unwashed or borrowed, so that the number on it is not that of the man showing it, is sure to be the one pitched on by the inspecting officer. From the regimental officers' point of view, the general with fads is a real nuisance. One who was madly keen on office records, and bothered about little else, always ordered them to be kept in the way he liked, which was not the way laid down in regulations. He was succeeded by a man who was an expert in soldiers' messing, and invariably wanted to know what happened to the rice ration.

Another amused himself by looking under the dhurry men have on their beds in India, and various and miscellaneous were the articles he found concealed in the recesses of the corrugated iron bed boards. After all, a general makes an inspection to see what is wrong, and some are not happy until they discover something. On one occasion a general couldn't find anything to complain of for some time, and was getting surlier and surlier, until on his way round stables he saw a leather bucket half hidden in a hole. But it had to be brought out, and proved to be full of soft soap. Having told off everyone concerned, he became quite genial. On another occasion the same general could only find one thing to complain of, and that was that the moustache of one of the subalterns was too long.

(*Broad Arrow*—January 31, 1913.)

PRICE OF REMOUNTS IN RUSSIAN ARMY.

(Order No. 483, War Department, St. Petersburg, September 9, 1912.)

THE Council of War, by resolution dated August 9, 1912, has decreed:

1. To increase in 1913 the average remount price for the purchase by the Remount Commission of remounts for the cavalry and artillery in European Russia, as follows:

(a) For a saddle horse of good blood for the cavalry and artillery from 385 to 400 roubles.*

(b) For artillery draught horses of good blood from 350 to 365 roubles.

2. To establish for the years 1914 to 1918 inclusive, the average remount price for horses for the cavalry and artillery in European Russia as purchased by the Remount Commission, to be:

(a) For saddle horses of good blood for the cavalry and artillery 425 roubles.

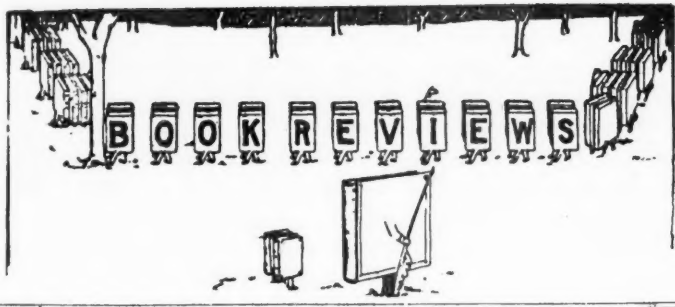
(b) For artillery draught horses of good blood 390 roubles.

*A rouble is worth about fifty-two cents in U. S. money.

AN UNIQUE PHOTOGRAPH.

The photograph which is reproduced herewith, was sent us by one of our members as being very unique, in that the horse was caught while standing on one foot.





**War
of
To-day.***

The second volume of Bernhardi's "On War of To-day" is an even more important and interesting contribution to the stock of our military literature than is the first volume. It is more concrete in its character and is startling in the plainness of its discussions of probable future war with Russia, France and England.

This second volume is subdivided into two parts, entitled: "Attack and Defense," and "The Conduct of War." Many recent wars are discussed by the author and interesting deductions drawn from them. The history of the American Civil War is freely drawn upon, showing that, even if the Germans did at one time regard this war as a conflict "of armed mobs," they now consider that valuable conclusions may be drawn from it.

General Bernhardi repeatedly assails the most universally accepted principles of tactics and points out the dangers of one-sidedness and fixed schemes, both in attack and defense. For example, in discussing the relative advantages of outer

*"ON WAR OF TO-DAY."—By Friedrich von Bernhardi, General of Cavalry, retired. Authorized translation by Karl von Donat, Late Lieutenant 33d Fusileers Regiment, German Army. Volume II, (Combat and Conduct of War), with eleven sketches. HUGH REES, Ltd., London. Price 9s.

and inner lines and of the combined frontal and flank attack, he says:

"There is thus a reciprocal effect of merits and demerits of the inner and outer lines. They neutralize each other, as it were. But the outer lines lead tactically, as I said before, to the opponent being enveloped, while on the inner line there is the danger of being enveloped by the opponent. We must from this point of view, attribute a certain amount of superiority to the outer lines.

"But this does not at all justify the notion, so widely held in our time, that operating on the inner line under modern conditions is as good as impossible, because the mass to be removed is too great, and freedom of movement on the inner line too much restricted. By adhering to such a notion we shall become as one-sided as Jomini, who once thought he had recognized in the inner line the most essential secret of the art of war. We must guard against all one-sidedness respecting the forms of attack and defense too. There is no form that could, as it were, be termed the only right solution. It would be defying all historical truth and sound logic should we wish to accept such a form.

"We, unfortunately, in the German Army, are on the high road of becoming slaves to such one-sidedness. The principle of giving preference to the outer lines rules all our notions of strategy, and tactically the same idea has already assumed a schematic character, added to which the German 'Infantry Training' (Drill Regulations) gives official expression, thus sanctifying, as it were, the schematism in the form of attack. 'The combination of frontal with enveloping attack best insures success' is the wording of the vital sentence, (Par. 392.) *That sentence is wrong*, as I have already explained in detail. It only proves correct with perfectly arbitrary notions about the strength and attitude of enemy. *But that sentence is also dangerous*; for not only does it render it difficult for a commander to strive after victory by other methods, which, from immediate circumstances, seem perhaps more expedient, but it also makes it easier for the opponent to adopt suitable counter measures if he can with some certainty count upon the opposite party always acting on the same principles."

The author illustrates his point by describing the action at the Diamond Hills, in the Boer War, as follows:

"The hostile center was here the only possible direction of attack for the British, because it most directly threatened the vital artery of the Boer Army, and would have scattered the army itself in two directions. Yet Louis Botha was so sure of Lord Roberts acting on his theory of envelopment, and so sure of his reluctance to attack in front, that he occupied the center of his position quite weakly, as a mere pretence only, and distributed his main forces on both flanks, so as to envelop the numerically far superior enemy himself, whilst the latter, as Botha had rightly anticipated, was attempting to do the same to him."

F. S.

**Under
the
Old Flag.***

This new work from the pen of that distinguished soldier and gifted writer, General James H. Wilson, has been received too late for an original and extended review in this number of the CAVALRY JOURNAL.

However, it is safe to say that anything written by General Wilson will prove interesting reading and more particularly since these two volumes of over eleven hundred pages, exclusive of an apparently complete index, covers the experiences of this distinguished soldier for a period of over forty years.

The following is from the publisher's notice of the work:

"These are spirited memoirs of three wars by one of the best known of living American Generals. The work describes General Wilson's active life and experiences in the Civil War, in the Spanish American War and during the Boxer Rebellion in China. He served on Grant's staff and figured prominently

*"UNDER THE OLD FLAG." Recollections of Military Operations in the War for the Union, the Spanish War, the Boxer Rebellion, etc. By James Harrison Wilson, Brevet Major General, U. S. A., late Major General U. S. V.; Engineer and Inspector General on Grant's Staff; Commander Third Cavalry, Division Army of the Potomac; Commander Cavalry Corps, M. D. M., etc. Two volumes (580 and 582 pages). D. Appleton & Co., New York. Price \$6.00, postage extra.

throughout the Civil War. His raid at the Ream's Station, in which he drew Lee's army away from Grant, was one of the brilliant events of the great conflict. He was the friend of Lincoln, Grant, Sherman, Sheridan, Dana, McClellan, Custer, and other great men of that period, whom he pictures intimately. He throws new light on many of the maneuvers and campaigns of the Civil War, and his descriptions are likely to arouse controversy. He served during the Spanish War as a senior Major-General, and afterwards help to reorganize the Cuban Government. He commanded the joint American and British forces for a time during the Boxer uprising in China. He represented the Government at the Coronation of King Edward. As a delineator of character and a narrator of graphic incident General Wilson is a master. His work is not only a valuable historical document but an usually readable story of an active, picturesque life."

The following are extracts from a review of the book by George Haven Putnam written for the *Literary Digest* and which appeared in the March 1, 1913, number of that periodical:

"In delaying the production of his memoirs until half a century after the close of the war, the General has lost many readers among his contemporaries, the veterans who have now 'joined the majority,' but as an offset to this loss, he has secured certain advantages. He has been in a position to free himself from the heated atmosphere of the contest and to write from the point of view not of a combatant only but of an historian; while his book appears at a time when there is an assured revival of interest in the war period and a real desire on the part of the thoughtful citizens of the new generation to learn something of the things that happened and of the characters of the leaders who were responsible for the direction of affairs. The General is now in the full maturity of his life, and his narrative may be accepted as presenting final conclusions arrived at after half a century of deliberation. It need not be assumed, however, that the book is on this ground characterized by any oversateness or coldness of presentation. The story moves forward briskly, with a glow of vitality and with a force of expression that recall one of the General's own cavalry charges. The reader feels that he is in the company of a youngster

whose opinions are as burning, and, we may add, as assured, as was the case when the young lieutenant, at the opening of the war, was seeking the most active kind of service. We may conclude that General Wilson belongs to the fortunate group of mortals who never grow old.

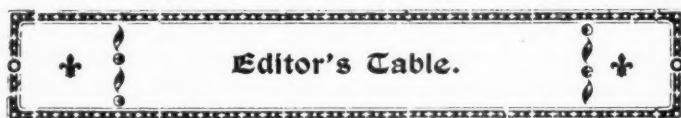
"His experiences during the four years' war were singularly varied, but the variety was due not simply to the fortunes of war but very largely to the wide capacity and endless energy of the man himself who sought and found opportunities for work, and particularly for fighting, in the several channels in which he was able to distinguish himself. He was graduated from the Academy at West Point with the first six of his class, and his high position gave him the opportunity of selecting the engineer corps for his service. He had, even as a cadet, distinguished himself for skill in horsemanship, and his assignment as an engineer could not keep him from the more stirring activities of cavalry service. It was as a cavalry leader that he finally won his chief distinction and secured his highest honors. His training as an engineer and his exceptional resourcefulness brought him into demand for staff service, but he secured a cavalry command, and after he was leading a division, and finally a corps, of cavalry he was always able at critical moments to use to advantage his engineering skill and ingenuity. He proved to be a most valuable staff officer; whatever fatigue he might have undergone, he was always ready for fresh work and was constantly volunteering for one arduous service or another. He was also ready with suggestions and counsel which, while always deserving of consideration and often proving to be of importance, must occasionally have seemed somewhat assuming, presented from a youngster to men who were much his seniors in years and in experience. One cannot but be impressed throughout the volumes with the naive confidence of the young officer, and with his certainty that his conclusions in the pending matter must be not only important but more valuable than any other recommendations that could be presented.

"In 1861, when his active service began, Wilson was twenty-four years of age. For a year or more, he did staff service with rank ranging from lieutenant to lieutenant-colonel.

But he was given the command of a brigade when he was but twenty-six, and before he was twenty-eight he had the control as an independent command of the greatest corps of cavalry that was brought together during the entire war. It is to be borne in mind also that this cavalry corps was practically Wilson's own creation, and he was able to demonstrate, as no previous cavalry commander had done, the distinctive service that could be rendered in battle, and in pursuit after battle, and even, when well in advance of any supporting infantry force, in assaults on entrenched positions by a well-organized and well-led corps of cavalry.

* * * * *

"General Wilson's career shows him as in more ways than one, and in the best sense of the term, a typical American. His devotion to his work, his many sided capacities, his energy, enterprise, and organizing ability, his quick preception of the qualities of the men, with whom he had to serve either as subordinate or as commander, and his ready understanding, even in the earlier years of his army work, of large operations, placed him in a position to render service of most exceptional value. This value was, as we have seen, recognized by army commanders of very varying character and in a way most complimentary to Wilson himself. Wilson's frankness in expressing himself to his seniors and superiors his opinions either in regard to campaign plans or movements or concerning their own individual operations, seems never to have impaired his relations with them or their confidence in him. He showed himself well fitted from step to step for the highest responsibilities that were placed upon him or that he created for himself. The war could undoubtedly have shortened by many months if our armies could have had as leaders a few more men of the devotion and the capacity of James Harrison Wilson."



CAVALRY REORGANIZATION, ETC.

Within the last few months several subjects of vital importance to the cavalry of our service have been under discussion, they having been brought to the front by the action taken by some of our Branch Associations.

The first, and probably the most important of these questions was advanced by the Fort William McKinley Branch Cavalry Association and is that regarding the reorganization of our cavalry and particularly as to the proposition to reduce the size of our cavalry regiments.

That Branch Association, having a membership of about seventy cavalry officers, or nearly ten per cent. of the cavalry officers of our service, after mature deliberation, resolved that no change in the present organization of our cavalry was necessary or advisable and that especially was it unwise and inopportune to advocate any reduction in the size of our cavalry regiments.

This and other subjects relating to the cavalry service had also been under consideration by the Fort Leavenworth Branch Association at their several meetings during the winter, at which meetings the cavalry members of the Special Field Officers' Class of the Army Service Schools, representing nearly every cavalry regiment, were present, and participated in the discussions. At the meeting of this Branch, held on March 6, 1913, the following resolutions were unanimously adopted, after a full and complete discussion:

"That this Branch Association approves most heartily the proposed bill as set forth in the resolutions adopted by the West

Point Branch Association and recommends that the Executive Committee of the U. S. Cavalry Association bring the same to the attention of the several Branch Associations with a view of obtaining their endorsement of the same.

"That this Branch Association approves most heartily the resolutions as adopted by the Fort McKinley Branch Association; and further that we maintain that it is unwise to advocate any change in our present organization of cavalry regiments; provided, however, that the war strength of a troop of cavalry should be 100 troopers and that our cavalry should be maintained, at all times, at such war strength.

"That this Branch Association approves the General Staff plan for the reorganization of the mobile army and that it is desirable that the U. S. Cavalry Association should go on record as advocating the same."

Soon after this, on March 12th, the Executive Council of the Cavalry Association, in accordance with the suggestions and requests of the two Branch Associations mentioned, formulated and sent out to the several Branch Associations, and also to those cavalry officers stationed at Posts where no Branch Associations existed, the following propositions for an expression of their opinions upon the same:

"*First.*—Shall the Cavalry Association advocate the adoption of the General Staff plan for the reorganization of the several arms of the mobile army?

"*Second.*—Shall the Cavalry Association advocate the adoption of the bill proposed by the West Point Branch Association regarding the relative rank of officers?

"*Third.*—Shall the Cavalry Association advocate and urge the retention of the present organization of our cavalry and use its best influence with the Cavalry Board that is now considering that question to prevent any such change?

"*Fourth.*—Is it deemed desirable that the stand taken or proposed against the reduction in the size of our cavalry regiments, or, in fact, any change in the organization of our cavalry be advocated through the columns of the CAVALRY JOURNAL?"

The fourth of the above propositions was inserted at the suggestion and request of the Editor of the CAVALRY JOURNAL because he had been criticised, mildly it is true, for having pub-

lished so many articles that were in the line of advocating a reduction in the size of our cavalry regiments, and so few in opposition thereto. This discrepancy between the number of articles for and against this proposition has been due simply to the fact that those favoring the proposition have been more active in furnishing "*dope*" along this line for publication. As has been noticed, nearly all these articles favoring a reduction in the size has originated in Washington.

However, the reports from the Branch Associations and others of the action taken on the above named proposition were prompt and decisive, and almost unanimously in favor of each of them. Every Branch Association, with one exception, has been heard from and the one exception was due to an unfortunate mistake in sending the questions to one who took no interest in the matter, instead of to the proper official of the Branch Association.

Generally the votes from these Branch Associations and those from the officers at stations having no Branches, were in the form of resolutions endorsing the propositions as submitted to them or by the individual votes of the officers at the several stations, they, however, in some instances, making additions to the proposition as set forth in the circular letter from the Executive Council. These variations from a simple endorsement are as follows:

" * * * This Branch Association, while endorsing the Cavalry Association and its individual members using their influence with the Cavalry Board, does not approve of the Cavalry Association or its members using their influence with Congress except through military channels."

"This Branch Association recommends that the CAV-ALRY JOURNAL take a decided stand against the reduction in size or change in organization of our cavalry regiments and to advocate the same in its columns without, however, closing its columns to the opposite side of the question."

"That this Branch favors the essential features of the plan for the organization of the Army as outlined in the "Report on the Organization of the Land Forces of the United States"

(War Dept., August, 1912); that it recommends the support of that plan as a whole by the U. S. Cavalry Association that it regards as of doubtful expediency the publication of any specific pledge, purporting to bind the members of the Cavalry Association to the support of that plan—at least until it is clear that the legislation by means of which it is proposed to carry the plan into effect includes so essential a part of the proposed scheme as an equitable adjustment of promotion under the "*one list*" plan indicated on pages 46-47 of the report above cited.

"That this Branch favors the readjustment of relative rank along the general lines indicated in the bill proposed by the West Point Branch of the Cavalry Association; but is of the opinion that a much better bill, as to details, may be had by incorporating into legislation Section 1 of the proposed rules governing relative rank as presented on pages 46-47 of the report above cited. This preference is based upon the fact that the Section referred to of the General Staff plan disturbs much less the existing relative rank of officers in the same arm of the service and apparently provides a much more equitable arrangement of relative rank in the cases covered by sub-sections (a), (b) and (c) of that Section.

"Assuming that it is inexpedient to include in the present bill the "*one list for promotion*" feature, it is nevertheless believed that any readjustment of relative rank made at this time should conform, as nearly as possible, in each grade, to a list that might subsequently form an equitable basis for an arrangement, on a single list for promotion, of the officers of the Mobile Army, in case that question should later come before Congress.

"Moreover the support of a bill in the form indicated on pages 46-47 of the report cited would have the further advantage of being in support of a feature expressly advocated by the War Department and forming part of the Department's plans for the organization of the army.

"While thus stating its emphatic preference for the provisions of the General Staff plan cited above, this Branch recognizes the importance of harmonious action by the Cavalry Association and the advantage to be gained by the union of the

Cavalry and Infantry in support of any suitable bills. If, therefore, good reasons can be advanced tending to show that the West Point bill is preferable to the General Staff provisions, this Branch requests information as to the advantages of the West Point bill with a view to further consideration of the latter.

"This Branch does not favor any movement looking to the reorganization of the cavalry at present.

"That this Branch deems it desirable that the JOURNAL of the Association oppose any movement looking to the reduction of the strength of the cavalry regiment or to any other reorganization of the cavalry arm at the present time; that it be made clear in the JOURNAL, that any article published in a sense contrary to the above do not represent the Association as a whole nor the opinion of the Executive Council; and that the Executive Council discourage the publication in the JOURNAL of articles on reorganization that are in opposition to the views believed to represent the Association as a whole."

"This Branch of the Association approves the tactical organization for cavalry as published on pages 126 and 127, Report of Chief of Staff, 1912, except that the following should be added: It is believed that for purposes of instruction as well as for special work in the early stages of a campaign, the minimum peace strength of the troop should be 86 men and, 80 serviceable horses, this being the present maximum capacity of troop barracks and stables.

"This Branch Association approves the suggested 'Rules governing rank and promotion' published on pages 132 and 133, Report of the Chief of Staff, 1912."

"This Branch Association is opposed to any radical change in the size of the regiment or to any reorganization based on the double rank system, and urges that the influence of the Association be used in this direction with the Cavalry Board and with Congress.

"This Branch Association deems it desirable that the columns of the CAVALRY JOURNAL be used to advocate the principles above set forth, and that when articles appear therein

contrary to these principles that the Editor preface the same with a note to the effect that the Association does not favor the views set forth."

"1. This Branch Association believes that the Cavalry Association should go on record as recognizing the fact that the Army of the United States needs to be better organized for war. The plan proposed by the General Staff in its "Report on the Organization of the Land Forces of the United States," although calculated to bring about efficient organization of the regular Infantry divisions, does not sufficiently recognize the fact that the numerical weakness of our Cavalry will prove a serious handicap in case of war. A very considerable increase in the Cavalry is regarded as absolutely necessary because there is very little National Guard Cavalry, because it will be extremely difficult and in many States impossible to organize and maintain efficient National Guard Cavalry, because a number of Cavalry divisions should be ready to take the field at the very out break of war, and finally, because efficient Cavalry cannot be organized and trained on short notice.

"2. The greatest need to-day of the Army of the United States and therefor of the Cavalry branch is a higher degree of professional unity. Without such unity the Army is as a house, divided against itself. Coöperation and team-play are as necessary in peace as in war. A "single-list" for promotion affords the only way to secure them. We heartily concur in the statement of the General Staff that it is "considered absolutely necessary preliminary to any reorganization of the Mobile Army to place promotion on an equitable basis independent of organization.

"3. We believe the CAVARLY JOURNAL should take a firm stand against any reduction in strength of Cavalry regiments. The pages of the JOURNAL should be open to all contributors but its policy should be strongly and constantly against any agitation for such reduction. Aside from tactical objections it must be remembered that any reduction in size of regiments will undoubtedly operate to reduce proportionately the effective strength of the entire Cavalry force of the United States."

Officers at one station, with three exceptions, voted to support the General Staff plan, but with the modification that: "We do not favor the scheme of the General Staff for reorganization in its entirety, but express ourselves in favor of the promotion feature of the General Staff plan." At another station four officers voted against advocating the General Staff plan.

"This Branch Association also desires to place itself on record as being unanimously opposed to any policy which would deprive the cavalry arm of the pistol or revolver in action and desires the Cavalry Association to voice the sentiment of the arm through the columns of the CAVALRY JOURNAL."

One Branch Association adopted the following regarding the General Staff plan:

"Whereas, the scheme for reorganization of the Army as promulgated by the General Staff has already been adopted and partially executed by the War Department, and

"Whereas, the remainder of the scheme is in process of development,

"Be it resolved, that the U. S. Cavalry Association should abstain from the adoption of any fixed policy with regard to such scheme.

The same Branch also adopted the following:

"Whereas, it is believed that no real coördination can be secured looking to a suitable reorganization of the mobile forces of the United States until bias and personal ambition have been eliminated, be it

"Resolved by this Branch Association that it is heartily in favor of the concentration of all of the energy of the U. S. Cavalry Association to securing the one list for promotion, such as now exists in the line of our navy."

In conclusion, our members are informed that a Committee of Cavalry Officers has been selected to confer with a like Committee from the Field Artillery Association and the Infantry Association with a view of agreeing upon a fair and just scheme of reorganization of the mobile forces of our army and it is

hoped that they may come to an agreement that will, in the end, prove satisfactory to all arms and bring about the much to be desired harmony between them.

CAVALRY ORGANIZATION.*

The discussion of the organization of our cavalry regiments has made it clear that cavalry officers generally are attached to their present organization. This organization is believed to have been developed out of our experience in the Civil War, where our cavalry performed valuable service and attained a higher efficiency than had been attained by cavalry previously. We are proud of our cavalry organization because it is distinctively American and not copied from a foreign model. Our infantry have paid our organization the highest possible compliment by imitating it.

The subdivision of the regiment into three parts (formerly called battalions, later mis-named squadrons) each of four troops (formerly called companies) is a flexible one, capable of convenient subdivision and one which gives our colonels, majors and captains commands appropriate to their rank.

Cavalry will in the future be called on not only to hold points of support, to cover the deployment of infantry and to cover the retreat of infantry by delaying actions, but will also be required to make serious dismounted attacks against the flank and rear of hostile infantry. Our present regiments, which can place about a thousand rifles on the firing line, are convenient and efficient units for this work.

Our troops of from 80 to 100 men and horses are quite large enough for a captain to command and care for as he should do. Captains of infantry and artillery receive the same pay as captains of cavalry and are supposed to possess about the

*Notwithstanding the fact that the above has appeared in at least one of the weekly service periodicals, it is considered of such value as to warrant its reproduction in the CAVALRY JOURNAL, especially as it is particularly a cavalry subject and one that is of vital interest to our cavalry.—EDITOR.

same amount of experience and training. It is proposed to raise the strength of our infantry companies to 150; if our cavalry troops are raised to 150 men and horses there can be no question that the cavalry captain will have a more difficult and responsible position and longer hours of duty than the infantry captain. The size of the European company, escadron and battery is influenced by considerations of economy to a greater degree than is necessary in this country; they could undoubtedly be made more efficient by grouping the same number of men in smaller units. Our country maintains only a small army and on that account this army should be maintained at the highest possible standard of efficiency. Our cavalry troops of 80 to 100 men, our infantry companies of 108 to 150 men and our batteries of four guns give us an opportunity to attain a higher degree of efficiency than would be possible if these units were larger.

FARRAND SAYRE,
Major, Cavalry.

DOUBLE VERSUS SINGLE RANK.

This question is one among the several that is now being agitated and discussed by those in authority in connection with the general subject of the reorganization of our cavalry.

In this connection, therefore, the following will prove interesting to our cavalry officers:

From one of our members:

"The subject of the relative merits of the various types of Cavalry organization has been recently so much under discussion and is of such vital interest to the cavalry arm, that it occurred to me that experiences of the Confederate service might be of value in showing whether the evolution of their cavalry followed the same course as did the Federal cavalry or a different one.

"I have found a small volume published in 1863 and entitled 'A Revised System of Cavalry Tactics,' by Major-

General Joseph Wheeler. The introduction to this work is interesting in showing clearly the opinion of this cavalry leader in the very midst of the Rebellion.

INTRODUCTION.

'Much has been said regarding the relative advantages of single and double rank formation. We have seen that the depth of formation has been gradually decreasing during the last two thousand years, from ten or even sixteen ranks to the present system.

'The most perfect system of formation is that which enables the commander to do the most service with a given number of men. We will suppose a cavalry brigade of four regiments to be drawn up to charge the enemy. With the single rank formation the brigade will be formed in four lines and inflict upon the enemy four successive shocks, each of which would be nearly as severe as a charge in two ranks, and the number of shocks being double, the amount of execution would certainly be much greater.

'Another advantage in single rank, is the greater facility with which troops can be handled and reformed, after the confusion of a charge, and what is of more importance, disorder or confusion are less liable to be incurred. These together with several other minor considerations, have induced cavalry officers of most experience both in Europe and America, to prefer the single to the double rank.

'By forming the flank squadrons in echelon, the enemy would be ignorant as to whether the regiment charging them was in one or two ranks, and therefore the moral effect would be the same in both cases.'

"It would seem but proper that ideas formed as the result of the evolution resulting under the stress of actual war, should bear great weight."

From Roemer's Cavalry, Its History, Management and Use in War:

"But of all differences respecting formation, the most important is that which relates to the number of ranks. After the lapse of various epochs, and since we have gone back from

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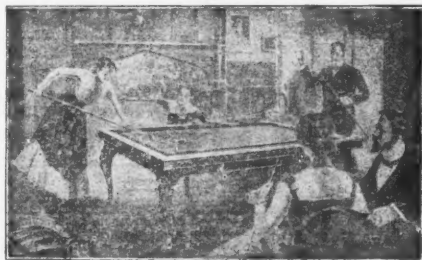
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deep to extended formations, it has been at last decided that the front rank alone effects the charge; that no weight or after charge can be contributed by troops placed behind; and that the rapidity is not increased by the pressure of those who follow, as with infantry. The practical result of this decision is that the cavalry of all the European nations is now formed on two ranks. As early as the time of Louis XIV, the losses incurred by some regiments obliged him to dispense with the third rank, and similar reasons in later times have necessitated an occasional formation in one. Some English tacticians have gone even further and recommended the permanent adoption of a single-rank system, which was practically tried for the first time in 1833, by General Bacon, in Portugal, where he commanded the cavalry of Don Pedro.

* * * * *

"Still, this new system has found advocates among the most distinguished cavalry officers both here and in England. The following letter from the Duke of Wellington, addressed to Lord William Russell, in 1853, expresses his opinions on the subject, which are not only interesting, but, proceeding from so high an authority, are entitled to the most careful consideration:

'Although I suppose that it will never happen to me again to have anything to say to the discipline of the troops, I have passed too many years of my life in relations with them, and in reflections upon what was good and useful to their discipline and movements, not to feel an anxiety relative to the formation of the cavalry.

'In my opinion the cavalry is useful, and even safe, only by the use of very large reserves. It is essentially an offensive arm, whose efficiency depends upon its activity combined with its steadiness and good order. I think that the second rank of the cavalry, at the usual distance of close order, does not increase its activity. The rear rank does not strengthen the front rank, as the center and rear ranks do the front rank of the infantry. The rear rank of the cavalry can augment the activity or even the means of attack of the front rank, only by a movement of disorder.

'If, then the attack of the front rank should fail, and it should be necessary to retire, the second or rear rank is too close to be able to sustain the attack or to restore order. The second rank must be involved in the defeat and confusion, and the whole must depend upon some other body, whether of cavalry or infantry in reserve, to receive and protect the fugitives.

'I have already stated that the second or rear rank can augment the means of the first rank only by a movement of disorder. This is peculiarly the case if the attack should be successful. In all these cases the second rank—at a distance sufficiently great to avoid being involved in the confusion of the attack of the front rank, whether successful or otherwise—could aid in the attack, or, if necessary, cover the retreat of the cavalry as a body; while by the absence of all impediments from the closeness of the rear rank, the activity of the front rank would be increased.

'But my opinion always has been that the whole practice of the cavalry ought to be one of reserves. I thought that the cavalry at two deep ought never to appear but in three lines. At one deep it follows that, if my reasoning be correct, three lines would still be sufficient; but I should be inclined to say that four or six lines would be preferable to a smaller number.

'The facility of movement is so great, and the use of the arm can be rendered of so much importance by the aid of artillery, that I should have no apprehension of not being able to bring up the lines from the rear to the front or to a flank, and to apply them to the most useful purposes of attack, if necessary. At the same time it cannot be denied that this required for the actual attack, the less they are exposed the better. My notion of the distance of the lines of cavalry was, as much as a cavalry horse could gallop in a minute. I would have the second line pull up at a walk when the first should charge; the third line, always in column, should deploy at the same moment, and then act as ordered for the second line, in support of the first. The supernumerary lines beyond these should all act as ordered for the third line.

'In Napoleon's great battles, he never charged with masses of cavalry. He used his cavalry, supported by great masses of artillery, to sieze positions; and he afterwards occupied them,

with his infantry or his artillery, to operate on the morale of his enemy by turning a flank, or occupying a post in the center of his army with celerity. He tried this maxim in the battle of Waterloo, but the British infantry was too steady, and it did not answer. In all these operations the first movement of the cavalry is offensive, and the proper movement of that arm.

'But after the position is siezed the cavalry becomes defensive. Its order, depth, the removal of the great body of it from the effect of the fire of the enemy, the security of the flanks from the attacks of the enemy's cavalry—all become important, and can be only attained by reserves.

'I conceive that the one-rank system would require a change, not only in the discipline, but in the organization of the cavalry. If I am not mistaken, it would render the use of cavalry in an army much more general than it is at present.' "

Attention is also invited to the reprint of an article by Philip St. Geo. Cooke, appearing in this number of the *CAVALRY JOURNAL*, in which he comments upon the question.

CLUB RATES.

As will be seen from the notice appearing on the inside back cover of this number of the *CAVALRY JOURNAL*, mutual clubbing rates have been established between the U. S. Infantry Association, the U. S. Field Artillery Association and the U. S. Cavalry Association for the *Journals* of the respective Associations.

It will also be noticed that the club rate heretofore existing for the *Infantry Journal* and the *CAVALRY JOURNAL* for the members of the other Association has not been changed from what it has been for the last several years. The question of advancing this rate, on account of the increased cost of publication, was seriously considered but it was finally decided to retain the old rate for at least another year.

It is believed that it is to the advantage of all officers of the mobile army that they become subscribers to the *Journals*

of the Associations other than their own as they thereby become familiar with the progress and improvements taking place in those arms and become better fitted for higher commands in time of war.

THE RASP.

We are advised that "*The Rasp*" for 1913 is now in press and will appear early in June. It will contain:

1. Illustrated and written records of the work at the Mounted Service School, 1912-1913.
2. Articles on subjects of interest to the mounted service—"The Application of the Mounted Service School Methods to the Enlisted Man and the Service Mount"—"A Thorough Discussion of the Subject of Jumping"—"Suggestion for a Course of Instruction in the Officer's Garrison School of Equitation"—"An Article on Military Sports, Outlining a Proposed Organization for Advancing Polo in the Army"—and many others all written by officers especially qualified for the task.
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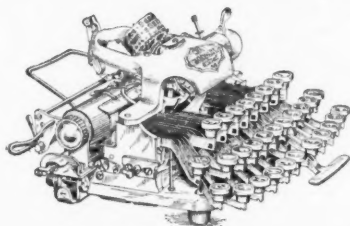
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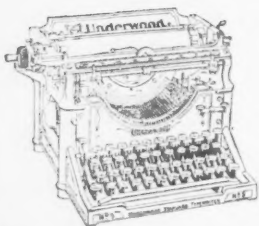
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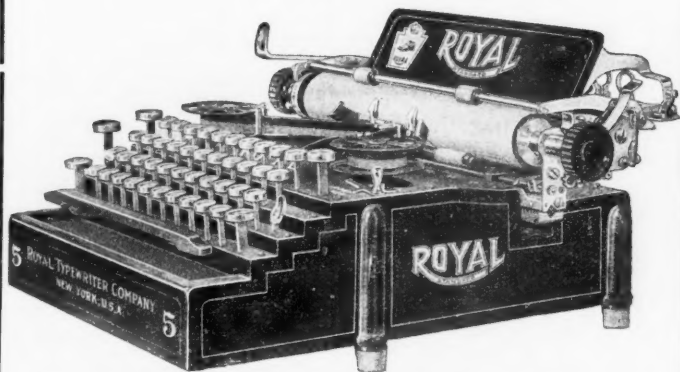
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